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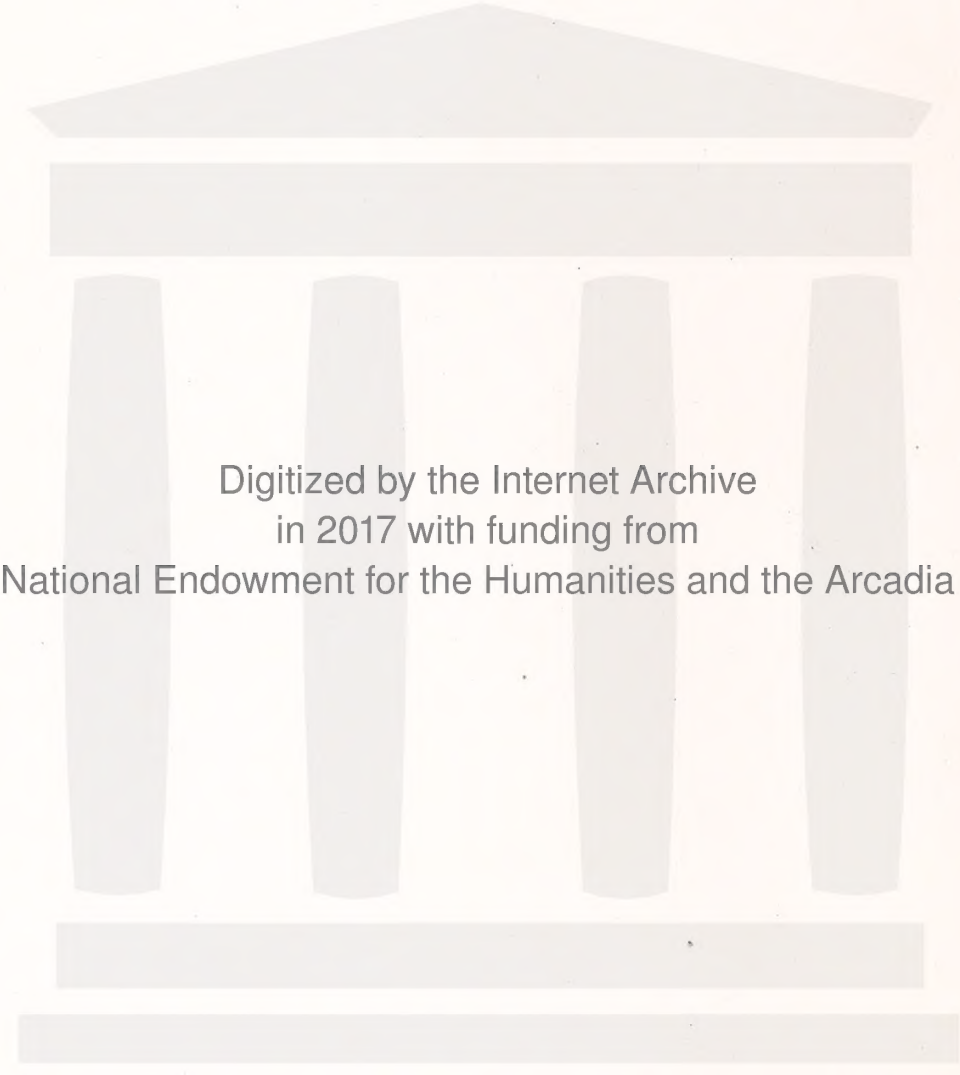

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(E), Editorial; (M), Miscellaneous; (N), News; (O), Original Articles; (MR), Medicinal Remedies; (SN), Society News:

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Texas State Journal of Medicine

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Vol. XX **May 1924** **No. 1**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Beginning Volume XX.—With this number we begin a new volume, notwithstanding the original articles included are from those presented during the last Annual Session. Some day the volume will be changed so as to include in one binding all papers from any given annual session; perhaps it will be made to begin with January, which would be a saving in complications. However, changes of this sort are always conservatively considered, and made only after mature and extended deliberation. The next number will contain certain of the addresses made at the San Antonio session, the proceedings, and not much else. The publication of the original articles presented at the San Antonio session will begin with the July number.

In the previous volume, subjects were grouped, and occasionally, practically an entire number was devoted to some particular subject or related group of subjects. For instance, the present number is very largely devoted to the eye. We have endeavored to include in each number an article or two devoted to other subjects, in order to have an appeal for other readers than those most directly concerned in the major portion of its contents. For the current volume, it is planned to diversify each number, as nearly as possible, including an article on each of the subdivisions of medicine represented by our scientific sections. Of course, papers that are so closely related as to comprise symposia, will be published together.

Our first obligation is to publish those articles dealing with new subjects in a new way, or presenting something new and concerning which the element of priority is of importance. After that, there is no obligation, except to our reader, who desires an interesting JOURNAL each month. Papers will be so divided as to include both the good and the mediocre in each number. It would be poor policy to publish all of the good papers first, leaving the least interesting for the last. A glance at this number will demonstrate that this policy is being carried out.

Judging from the program of the Annual Session, there will not be such an overwhelming number of original articles for this volume. We will probably have more room for Society News items, and for a wider variety of Miscellaneous items. Perhaps we will give more attention during the year to the editorial section, endeavoring to include something of a scientific nature. There has heretofore been so much propaganda, and so much matter of prime importance pertaining to the general welfare of the profession and the progress of medicine, that the editorial section has practically become a mere medium of propaganda and information. We will be obliged to any reader who will make suggestions relative to the character of material that should be published, and who will furnish items of interest to the profession generally. It will not be feasible to print every item submitted, in all probability, but as much of the readable material as possible will be printed.

As we have said before, a state medical journal is hardly more than an overgrown bulletin, perhaps a good one, perhaps not so good, and by preference it should include in its pages very largely those items which will not be found in the strictly scientific publications, or publications intended for national

circulation. The scientific value of a state journal will be exactly in proportion to the scientific standing and enterprise of the members of the State Medical Association. Quite the most interesting items that we have included in the JOURNAL heretofore, have been original and live contributions by our own readers. That is not to discount our scientific articles, however. Indeed, abstracters give our articles a fair amount of attention. For instance, the April 12 number of *The Journal of the American Medical Association* abstracted three original articles and one miscellaneous item. We regard that as no small compliment. Let the scientific contributions continue and improve normally, but let us have more of the personal element, and more expression of the intimate relationship that should exist between good fellows.

This number will reach our readers, in all probability, during the time of the Annual Session. Those of our members who have been so unfortunate as to be detained at home, will be disappointed that it contains nothing pertaining to that most delightful event. As we have said, the June JOURNAL will be full of it, and we must be excused until then.

The Next Annual Session of the A. M. A., Chicago, June 9-13, gives promise of being one of the most interesting and attractive congregations of the medical profession of America ever witnessed. Chicago is nearer the center of medical population than most cities of sufficient size to entertain our great national organization, for which reason there will be a larger assemblage of the rank and file than is usually the case, and it is the rank and file of the profession that gives it body. The genius in the profession is most attractive and frequently most instructive, but the real inspiration, after all, comes from the doctor who spends his life at the bedside, for there he sees disease and death in their common state.

We feel that those of our members who can at all afford to do so, should attend this meeting. In this connection, we may point out that any member of the State Medical Association of Texas who desires to do so, may become a Fellow of the A. M. A., simply by showing his membership card and a $5.00 bill, at the registration desk in Chicago. Of course, it would be better to apply for Fellowship in advance, and get the Fellowship card before one leaves for the place of meeting. That will save time and trouble. *The Journal of the A. M. A.* will be more than worth the money. Indeed, it is difficult to see how a physician can keep abreast of the times without this publication. Every member of the State Medical Association of Texas, should be a Fellow of the A. M. A.

Those who expect to attend the Chicago session should without delay take up the matter of hotel reservations, either with the hotel of their choice, or with the chairman of the Committee on Hotels, Dr. Frank Morton, Room 1522, 25 East Washington St., Chicago. While some of the hotels have hung out the S. R. O. sign, there are others not so crowded, and now is the time to find them.

The rates are, as usual, one and one-half fare for the round trip. One-way tickets will be purchased, the purchaser *securing from the agent a return certificate,* with which half-fare tickets may be purchased for the return trip. If these certificates are not secured, it will not be possible to get the half-fare home. Before purchasing tickets it might be well to make inquiry as to the summer tourist rates. It may be more advantageous to the purchaser to buy round-trip tickets of this character. No certificate is necessary, of course, if this is done.

The Injunction Feature of the Medical Practice Act to Be Tested.—The Medical Practice Act, as amended by the Thirty-ninth Legislature, in 1923, received its first thorough and rigid test in the County Court of Hunt County, during March. E. Owen Moore and W. L. Johnson, chiropractors, have each paid a fine for violation of the law. Moore was fined $50.00 and one hour in jail in one case, and Johnson was fined $100.00 and one day in jail in one case. Each paid off and Moore later removed to San Antonio, leaving the field open to Johnson, who is still located in Greenville.

These cases were heard before County Judge Olin P. McWhirter, the State being represented by County Attorney Jas. W. Bassett, and the defendants by Wisconsin

counsel and local legal talent. Each case was tried before a jury of six, and final conviction was due to the testimony admitted and the court's charge as to the correctness of the law.

The testimony was confined, in the main, to the fact that the defendants had sought to practice upon the human body and the fact that neither of them had registered with the district clerk, as the law provides. These facts, together with the court's charge, were the basis for the convictions. It is felt that such a course by any court will make conviction certain, before any jury, in similar cases.

The injunction feature of the law will be tried out in the Eighth Judicial District Court of Hunt County, soon, when the county attorney goes before the district judge to enjoin W. L. Johnson, referred to above, against continuing to practice chiropractic. Johnson has some cases pending against him in the county court. Results of the test of the injunction feature are awaited with interest.

Our Regular Summer Clinics will be held in the Medical Department of the University of Texas, at Galveston, and the Medical Department of Baylor University, at Dallas, May 26-June 7, both dates inclusive. It has been found most convenient, if not actually necessary, to permit these courses to conflict as to time, because of the vacation necessities of the two teaching staffs concerned. The obligation we are under to the teaching forces of these post-graduate courses, is such that we must consider their conveniences first of all things. They have unselfishly devoted their time to this work, when they, in all probability, desired to use it otherwise. It is not believed that the one course will interfere with the other. It is not likely that any considerable number would attend both courses, in any event.

It will be understood that these clinics were instituted at the instance of the State Medical Association, through its Board of Councilors, following the advice of its scientific committee. They are being conducted under the general supervision of the Board of Councilors, and there are no charges whatsoever, although it has been variously suggested that the institutions giving the courses should receive recompense for the necessary outlay for material, and it has also been suggested that the teachers should receive some emolument, even though small in amount. These matters will have to be settled later on. For the present, the courses are free for the asking, to the extent of capacity. Both courses last year were largely attended, approximating, if not exceeding, the normal limitations. It would be advisable for those who contemplate attending either of these clinics, to correspond with the proper officials without delay. Dr. Wm. Keiller is Dean of the Medical Department of the University of Texas, and Dr. W. H. Moursund, is Dean of the College of Medicine of Baylor University.

The program for each course follows:

UNIVERSITY OF TEXAS, GALVESTON.

May 26, 9-11 a. m., surgical clinic, according to available cases, Drs. J. E. Thompson and A. O. Singleton; 11 a. m.-12 m., surgical ward rounds; 3-5 p. m., the application of biochemical methods of analysis to diagnosis, Dr. M. Bodansky.

May 27, 9-11 a. m., heart clinic, aortic disease, Drs. M. L. Graves, C. T. Stone, Joseph Kopecky, and Harris (aortitis, angina pectoris, aortic insufficiency, aneurysm, arterioscleroses); 11 a. m.-12 M., medical ward rounds; 3-5 p. m., the applied anatomy of hernia, Dr. H. O. Knight.

May 28, 9 a. m.-12 m., obstetrical and gynecological clinic, according to available cases, Drs. W. R. Cooke, H. R. Robinson and J. L. Jinkins; 3-5 p. m., the selection and preparation of tissues to be sent for pathological diagnosis, Dr. V. H. Keiller.

May 29, 9-10:30 a. m., demonstration of common dermatological conditions, Dr. E. D. Crutchfield; 10:30 a. m.-12 m., newer methods of diagnosing gall-bladder disease, with illustrations, Drs. M. L. Graves and C. T. Stone; 3-5 p. m., pyelitis in pregnancy, and obstetrical management of cases of pregnancy complicated by advanced cardiac disease, Dr. W. R. Cooke.

May 30, 9-11 a. m., surgical clinic, Drs. J. E. Thompson and A. O. Singleton; 11 a. m.-12 m., surgical tuberculosis in children, Dr. J. E. Thompson; 3-5 p. m., demonstrations of the anatomy of infections of the hand, Dr. J. E. Thompson.

May 31, 9-11 a. m., the purpuras and anaemias, Drs. Joseph Kopecky and C. T. Stone; 11 a. m.-12 m., medical ward rounds, Drs. M. L. Graves and staff.

June 2, 9-11 a. m., surgical clinic, according to available cases; 11 a. m.-12 m., surgical ward rounds, Drs. J. E. Thompson and A. O. Singleton; 3-5 p. m., fracture of the spine, Dr. Wm. Keiller.

June 3, 9-11 a. m., gastro-intestinal diseases (ulcer, cancer, inflammation, displacements), Drs. M. L. Graves, Joseph Kopecky and C. T. Stone; 11 a. m-12 m., medical ward rounds; 4-5 p. m., the Graham-Cole method of demonstrating the gall-bladder by radiogram, Dr. G. C. Lechenger.

June 4, 9 a. m.-12 m., obstetrical and gynecological clinic, according to available cases, Drs. W. R. Cooke, H. R. Robinson and J. L. Jinkins; 3-4 p. m., clinical pathological conference, Drs. Henry Hartman and

Joseph Kopecky; 4-5 p. m., benign and malignant ulcers of the rectum, Dr. V. H. Keiller.

June 5, 9-10:30 a. m., common dermatological diseases, according to cases, Dr. E. D. Crutchfield; 10:30 a. m.-12 m., neurological clinic (anterior poliomyelitis, aphasia, general paresis, dementia praecox), Dr. M. L. Graves and Dr. Harris; 3-5 p. m., the use of pessaries, and the diagnosis of causes of sterility, Dr. W. R. Cooke.

June 6, 9-11 a. m., pediatric clinic, according to available cases, Dr. Boyd Reading; 11 a. m.-12 m., intravenous medication for syphilis, Dr. E. D. Crutchfield; 3-5 p. m., demonstration of the surgical anatomy of the upper cervical and submaxillary regions, Dr. J. E. Thompson.

June 7, 9-11 a. m., pyelitis, pyelecystitis, and tuberculosis of the kidney and urinary tract, Dr. C. T. Stone; 11 a. m.-12 m., ward rounds.

BAYLOR UNIVERSITY COLLEGE OF MEDICINE.

May 26, 8:30-10 a. m., medical clinic, Dr. C. M. Grigsby; 10-12 m., general surgery clinic, Dr. H. M. Doolittle; 1:30-3 p. m., clinical pathological conference, "Cardio Renal," Drs. H. M. Winans and G. T. Caldwell; 3-4:30 p. m., surgical clinical conference, "Hernias," Drs. J. B. Smoot and W. W. Looney.

May 27, 8:30-10 a. m., pediatrics clinic, Dr. H. L. Moore; 10-12 m., medical gynecology clinic, Drs. E. Dunlap and L. M. Nance; 1:30-3 p. m., behavior problems in children, Dr. H. I. Gosline; 3-4:30 p. m., surgical clinic, "Goitres," Dr. C. M. Rosser.

May 28, 8:30-10 a. m., medical clinic, Dr. R. W. Baird; 10-12 m., general surgery clinic, Dr. C. M. Rosser; 1:30-4:30 p. m., neuro-psychiatry clinic, Drs. J. J. Terrill and G. F. Witt.

May 29, 8:30-10 a. m., pediatrics clinic, Dr. M. A. Hopkins; 10-12 m., ophthalmology and oto-laryngology clinic, Dr. E. H. Cary; 1:30-3 p. m., gastro-enterology clinic, Dr. H. G. Walcott; 3-4:30 p. m., surgical clinic, available cases, Dr. G. M. Hackler.

May 30, 8:30-10 a. m., medical clinic, Dr. Homer Donald; 10-12 m., general surgery clinic, Dr. G. M. Hackler; 1:30-3 p. m., dermatology and syphilology clinic, Dr. J. B. Shelmire; 3-4:30 p. m., clinical pathological conference, diseases of gall bladders, Drs. H. M. Doolittle and G. T. Caldwell.

May 31, 8:30-10 a. m., pediatrics clinic, Dr. G. B. McFarland; 10-12 m., urology clinic, Dr. A. I. Folsom.

June 2, 8:30 10 a. m., medical clinic, Dr. R. B. McBride; 10-12 m., general surgery clinic, Drs. S. Webb and M. E. Lott; 1:30-3 p. m., medical clinic, Diseases of Heart, Dr. C. M. Grigsby; 3-4:30 p. m., blood chemistry interpretation, Dr. W. H. Moursund.

June 3, 8:30-10 a. m., pediatrics clinic, Dr. R. C. Spence; 10-12 m., gynecology clinic, Drs. E. Dunlap and L. M. Nance; 1:30-3 p. m., medical clinic, Anemias, Dr. J. R. Lehmann; 3-4:30 p. m., obstetrical clinic, Dr. C. R. Hannah.

June 4, 8:30-10 a. m., medical clinic, Dr. G. L. Carlisle; 10-12 m., general surgery clinic, Dr. W. W. Shortal; 1:30-3 p. m., medical roentgenology, Dr. C. L. Martin; 3-4:30 p. m., the pharmacology of uterine movements, Dr. B. F. Hambleton.

June 5, 8:30-10 a. m., pediatrics clinic, Dr. H. L. Moore; 10-12 m., urology clinic, Dr. A. I. Folsom; 1:30-3 p. m., medical clinic, Diabetes, Dr. D. W. Carter; 3-4:30 p. m., demonstrations in surgical anatomy, Dr. W. W. Looney.

June 6, 8:30-10 a. m., medical clinic, Dr. H. M. Winans; 10-12 m., general surgery clinic, Dr. C. W. Flynn; 1:30-3 p. m., dermatology and syphilology clinic, Dr. J. B. Shelmire; 3-4:30 p. m., orthopedic clinic, Dr. W. B. Carroll.

June 7, 8:30-10 a. m., surgical roentgenology, Dr. C. L. Martin; 10-12 m., general surgery clinic, Dr. A. B. Small.

General surgery operative clinics each morning in the amphitheater.

General ophthalmology and oto-laryngology clinics each morning, at 10-12. Dispensary, 1:30-3 p. m.

Special demonstrations, applied anatomy of certain selected areas, using the special dissections in the anatomical museum, Dr. W. W. Looney. Time to be selected.

Dr. Brewer Dead.—Dr. C. P. Brewer of Fort Worth, Book Review Editor for the JOURNAL, died in a sanitarium in Fort Worth, April 12, 1924.

Dr. Brewer has been on our staff for many years. He has written practically every book review that has been published during that time. He took great pride in this work, and his complaint was that we did not allow sufficient space for this class of material. Dr. Brewer was a philosopher, and could have enriched his department with much material of that sort had there been room for it. His passing is a matter of grief to his associates in the office, and his services will be missed by our readers. An obituary notice will appear in the June JOURNAL.

The American Medical Association Bulletin is nominally the official organ of the House of Delegates of the American Medical Association. Until October of last year it was sent only to A. M. A. delegates and to officers of constituent state associations, except upon subscription. It now goes free to all fellows of the A. M. A. Its purposes are to keep us all informed on organization problems.

We commend the *Bulletin* to the close attention of those who receive it. The present editors, Drs. West and Warnshuis, the one Secretary of the A. M. A. and the other Speaker of the House of Delegates, are by temperament and training entirely fitted to choose material that will interest and enlighten. Dr. West was for a long time Secretary-Editor over in Tennessee, and Dr. Warnshuis is Secretary-Editor up in Michigan, and we desire to state that Secretary-Editors are in a position to know what is needed. They are more than meeting expectations. The *Bulletin* is eagerly looked forward to in the office of the JOURNAL. It contains so much of value to our readers that we are frequently tempted to reprint it. Almost every item is marked for future reference, editorially or in connection with some problem pertinent to the State Medical Association of Texas. We consider the *Bulletin* and *Hygeia* two of the real forward steps taken by the American Medical Association in recent years.

ORIGINAL ARTICLES

LET THE SPECIALIST DO LESS, THE FAMILY PHYSICIAN MORE—A REMEDY FOR FEE SPLITTING.*

BY

JNO. O. McREYNOLDS, M. S., M. D., LL. D., F. A. C. S.,
Colonel M. R. C., U. S. Army,
DALLAS, TEXAS.

It may seem strange that I should say, in this era of marvelous scientific development, that the medical profession is passing through the most crucial crisis of its history.

The danger lies not in an unresponsive spirit of investigation, for there has never been a time when so much talent and patient toil was so freely furnished to this field of study. The danger lies not in a want of sympathy and support on the part of the people and the concentrated wealth of the world, because never before has the preservation of human life held so strong a hold on the heart of civilization or commanded with such controlling force, the accumulated gold of the earth. The danger lies not in any weakness in the essential elements of the science or art of healing, because never before have the fruits of this tree been better or more abundant, in the blessings they have brought. The danger lies in the corroding spirit of commercialism that is creeping into the consciences of men, corrupting the consecrated character of professional honor, and dissolving the bonds of fraternal feeling—so essential to the full fruition of our promised destiny.

In the great warfare to preserve inviolate the lofty and historic ideals of our profession, there is a clear and grave responsibility which the specialist must meet and bear. He stands in the attitude of one who has passed through the regular college curriculum for the doctor's degree, and has served the allotted time in general hospitals or general practice, and then, in addition, has devoted a period of faithful study to some particular field of medicine or surgery. He has been generously accorded by the general profession and by the public, all of the consideration to which he is entitled; and in return, there should be demanded of him the highest exemplification of the finished physician and faithful friend.

Specialism, in these modern times, has encroached alarmingly upon that broad domain of the healing art, for centuries the acknowledged province of the family physician. Indeed, the practice of medicine has been divided and subdivided into so many parts, that the family physician can find but few conditions that are unprovided for by some of the various specialties of the profession.

Some days ago, I was consulted by a prominent citizen of New York, who told me that he had on his regular payroll no less than thirty specialists for himself, his wife and his children, and that his family physician, one of the most brilliant men of America, was consulted mainly for the purpose of ascertaining what particular specialist should be engaged for a given malady. And thus it transpires that the general practitioner, especially in the cities, is being converted into a mere machine for referring patients to other physicians. And here is the point where specialism touches the danger line in relation to the general profession and to the general public. If the family physician is thus deprived of his right to practice, and is simply consulted as to what specialist should be employed, then he becomes, in a measure, merely an agent for securing medical or surgical service.

And then, if this function, rather than the practice of medicine, should become his chief occupation, it is easy to see how the spirit of commercialism might take root and grow, as actual experience throughout the world will abundantly prove. And we find some very capable physicians, men who have attained high official positions in medical societies, asking themselves these questions: "What is wrong with the division of fees?" "What is wrong in paying a definite commission for patients referred?" "If a merchant can pay a commission on business secured, why cannot a doctor do likewise?" "If the patient must be referred to someone, why is it wrong to pay the family physician for his trouble and, in addition, reward him for his zeal?" "And if one specialist will offer a commission of 20 per cent, whose concern is it if another specialist should offer a commission of 40 per cent?" "If automobiles and other expenses have trebled the cost of living for the general practitioner, and his own charges have not been advanced in forty years, and the number of his patients has been reduced by the inroads of specialism, why is it wrong to divide fees?"

Be it far from me to throw a single impediment in the pathway of that splendid hero of our profession, the family physician. The history of civilization has recorded the name of no one more worthy of the world's highest honors and truest affection. All the blessings of earth and the benedictions of Heaven

*Chairman's Address, delivered before the Section on Ophthalmology Otology, Rhinology, and Laryngology State Medical Association of Texas, Fort Worth, May 8, 1923.

have been surely and bravely earned by this faithful friend and servant of mankind. Our duty to him is to consider well the difficulties that throng his pathway and render unto him without reserve, that full measure of justice and gratitude which he has won. And, remembering the lofty sentiments that have inspired his consecrated service, let us watch that we insult not his manly spirit by a suggestion unworthy of his life and character.

What, then, should be the attitude of the specialist to the family physician? Surely, it should not be the attitude of one who would propose to buy with money the influence of a high-minded man of science, entrusted with the sacred duty of guarding the life and physical welfare of his patient. Surely, it should not be the attitude of one who would propose that an afflicted child or a disease-stricken woman, should be practically auctioned off to that specialist who would offer the largest commission, or become a bargain between physicians, without the knowledge or consent of the patient who is vitally interested. Surely, this commercialism of human infirmities, so frequently practiced in secret, and in some quarters openly defended, cannot in the very nature of things secure the highest efficiency and the most faithful service. Such a system of clandestine agreements among physicians must inevitably debase the profession and make pecuniary profit, rather than honest merit, the basis of personal preferment.

But there is a way, and an honorable way, by which every physician can receive his just reward, and that is by a proper appreciation of the real function of the specialist. Reduced to its final analysis, the best and most useful duty of the specialist is that of consultant—a helper, a coadjutor of the family physician. The specialist should not be called upon to give those elements of treatment which could be reasonably relegated to the family physician. His labors should be confined to those features of professional service requiring that special discernment or dexterity which he is expected to possess. It is the duty of the specialist to lend his aid in unravelling the tangled threads of diagnosis, to contribute his skill in the surgical requirements of the case, and, as soon as possible, to return the patient to his home, under the care of his family physician. Thus an undue expense to the patient is avoided, and thus the family physician is reinstated in the case, so that he can receive for his services his own proper reward, and thus the specialist is relieved of unnecessary details and allowed more opportunity to extend his real usefulness over a wider and more fruitful field of labor. In fact, the essence of the remedy consists in utilizing to the fullest extent the personal service of the family physician, and in minimizing, as far as possible, the individual attention of the specialist. The remedy consists in returning to the family physician a large part of the medical treatment which has unnecessarily been discharged by the specialist. Let each receive his own remuneration for his own labor, but let the specialist do less, and the family physician more.

The second element of danger that is undermining the structure of our profession, is the too prevalent vice of unkind criticism. As the general profession and the public at large have accorded to the specialist in the various departments of medicine and surgery the credit of having attained some special familiarity with the subjects of their constant attention, it follows that this confidence involves an added obligation, not only to be just, but generous. And, as the specialist is thus constantly passing upon the work of the general practitioner, he has the fullest opportunity to commend or condemn. His essential duty is to help the afflicted, and I do not recall a case in thirty years' experience, in which it was necessary to encourage distrust of the family physician in order to render assistance to an unfortunate sufferer. Our field of activity is in the present and future, not in the past. Our great opportunity is in making hearts glad for whatever good we may do, rather than in filling them with regrets about things that cannot be undone.

It seems strange, indeed, that any physician of experience should not recognize that the habit of adverse criticism is a tree of unfortunate fruitage. The act of criticism is in itself an assumption of superiority, and invites at once the closest scrutiny of one's own deeds. And who among us has always obtained the results he had hoped to achieve? Who among us has not labored with diligence and with care, only to gather the melancholy fruits of failure? Is it not true that sometimes our best and most faithful service brings back to us the sting of ingratitude and the most unrelenting calumny?

Go search the records of our courts and you will find it to be the rule in all suits for malpractice, that the arrow of criticism has been aimed at some member of our profession whose skill and achievements have made him a shining mark among his fellows. You will find the arrow poisoned with the venom of envy that has been secreted and excreted by some pitiable perjurer who calls himself a doctor, and who has committed a thousand errors, many times blacker than the one with which he would seek to dim the lustre of his

neighbor's good name. You will also find the arrow plumed with the polluted feathers of that carrion crow, the professional damage-suit lawyer, who flaps his unwashed wings over a perfect forest of good deeds, until from the leafless limb of a dead tree, he scents the odor of some putrid object upon which he would feed and grow fat. What a congenial pair, the venomous viper and the voracious vulture! Let every honorable man in both of these splendid professions spurn as accursed the companion foes of the glorious art of healing and the protecting arm of justice. Let us all remember that, when in our careless moments we encourage by word, look or deed, the spirit of unkind and unmerited criticism, we are but sowing the serpent's eggs, and that in due season they will all hatch out, in the sands of time. We may all too keenly feel their fangs some day in our own tired and bruised feet, as we tread the rough road of duty.

One of the great fundamental, but too often forgotten, principles of scientific development, is that our records are written and our best monuments built, by our own deeds, and not by the downfall of others. We can never reach the mountain tops of truth simply because others fail. We cannot see the pure and radiant light of day because our brothers grope in the shadows dark and drear. Our lot is drawn, our destiny fulfilled by that eternal vigilance and patient, faithful toil that mingles wisdom's wondrous work with the sympathy of the soul.

OPHTHALMOLOGY IN TRANSITION.*

BY

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Medicine and surgery, in all lines, have made more rapid progress within the last fifty years than in the two thousand years preceding. It was indeed a fortunate thing for mankind when science invaded the field of medicine, and empiricism began to take its flight, but an unfortunate thing for the physician who never saw the light of the new day. During this period through which we have been passing, so vast have been the changes, so rapid the discoveries, that it is now impossible for one mind to follow the complicated ramifications of the diseases of a single organ in the body, even, such as the eye.

It has not been long since ophthalmology stood almost alone. The practice of ophthalmology is one of the oldest specialties, and it was well established before many of the other specialties were even thought of. Today, the ophthalmologist is absolutely dependent upon the internist, the pathologist, the roentgenologist, the dentist, the neurologist, the aurist, the rhinologist, and the surgeon. In fact, as the field of medicine broadens, and diseases become better known and understood, no specialist in any line is able to stand alone; they are all becoming more and more dependent upon their fellow workers, and this is as true of ophthalmology as it is of any of the other specialties. For instance, an ophthalmologist would be foolish to attempt to treat a diseased eye without assistance, if the cause of the disease had been ascertained to be an infection in some remote part of the body.

This brings us to another phase of this subject, which is, that during the period through which we have been passing, the character of the diseases for the treatment of which patients apply to the oculist, have also been changing. Years ago, recurrent attacks of iritis formed a large percentage of the cases, and as there were many recurrent attacks, they had to be treated through long periods of time. Since the causes of iritis and iridocyclitis have become better known, these patients do not apply so often for treatment. Many of these cases can be permanently cured.

The advances made in the treatment of general systemic infections have had marked effect on the eye. As the method of combatting infections in the anterior segment of the eye is much better known, we do not have the number of cases of corneal ulcers, with their frequent recurrences, that we had many years ago, nor do we have so many infections following operations. Sympathetic ophthalmia is now almost unknown. A knowledge of focal infection has enabled the ophthalmologist to promptly and permanently relieve many sufferers from inflammation of the eye, which before took long periods of time to give relief, with little or no hope of a permanent cure. I am of the opinion that glaucoma and cataract are both on the decline.

It has been a hard matter for the ophthalmologist to discern the true from the false. There have been many remedies put forward for the cure of certain diseases, which have been strongly advertised all over the country, and which, in the final test as to their curative values, have proved of little or no benefit. I may mention, as an illustration, the widespread use of adrenalin, a number of years ago, in the treatment of all inflammatory conditions of the eye. Its value as

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, March 10, 1923.

a curative remedy, upon more thorough test, was found to be slight; in fact, it did harm in certain cases, producing glaucoma in eyes where there already existed a slight increase of tension.

Where the ophthalmologist did not weigh all the evidence and look at things from a broad standpoint, the public often suffered, and an inevitable reaction took place. We have just been passing through a period which illustrates this point very clearly. At one time it seemed that because of diseases of the eye and other diseases, there would not be any tonsils left in the United States. I am glad to say that a reaction is taking place now. The tonsil will find its place. When there are diseased tonsils, they will be removed, thereby often curing inflammatory diseases of the eye, but they will not be removed so promiscuously as has been the case in the past.

On the other hand, there are certain beneficial things which the ophthalmologist has been slow to adopt. Take another example of focal infection—the relationship of the oculist to the dentist. There is no longer any doubt but that granuloma at the roots of teeth often cause inflammatory conditions of the eye. This, too, has been carried to the extreme in many cases, and many teeth have been needlessly sacrificed. The pendulum is now swinging the other way, and, in time, diseased teeth will be extracted and good teeth saved.

During the period through which we are now passing, it is hard for us to keep both feet on the ground. It requires a large amount of good, common, practical sense to tell the good from the bad. In fact, there has been no period in the long history of medicine, in which it has been harder to divide the wheat from the chaff, and our questions are by no means all settled.

The point I wish to emphasize is, the ophthalmologist must use every means at his disposal in making correct diagnoses, and when a diagnosis has been made, he must employ a degree of common sense that has not been required in any previous age, in applying the correct treatment.

Butesin Picrate. — Trinormalbutylparaminobenzoatetrinitrophenol—compound consisting of one molecule of trinitrophenol (picric acid) and three molecules of normal butyl ester of 4-aminobenzoic acid. Butesin picrate combines the anesthetic action of butesin with the antiseptic properties of trinitrophenol (picric acid.) An aqueous solution of 1:1400 produces immediate and complete anesthesia of the eye which lasts from ten to twenty minutes. Butesin picrate is used in the treatment of burns, ulcers and other denuded, painful lesions of the skin. For use, a one per cent. butesin ointment is supplied by the manufacturer. The Abbott Laboratories, Chicago.

THE VALUE OF BLIND SPOT DETERMINATIONS.*

BY

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The reason for bringing this subject to the attention of this section is our belief that it is an important, though sadly neglected, phase of ophthalmology. It has occurred to us that the reason more ophthalmologists do not make use of this valuable functional test, is that no simple, accurate and inexpensive method has been devised. There is little to be found in the text-books on this subject—even the *American Encyclopedia of Ophthalmology* devotes but a single page to it. By far the best discussion of the subject is found in three separate communications by Dr. Harry S. Gradle, to whom we are indebted for considerable of the information in this paper. Gradle's work is classical and anyone interested in the subject should study his published communications.

In 1668 Mariotte[1] announced the discovery of the blind spot, and demonstrated it to the king. His method was unique, inasmuch as he demonstrated the blind spot in both eyes at the same time, by placing two small

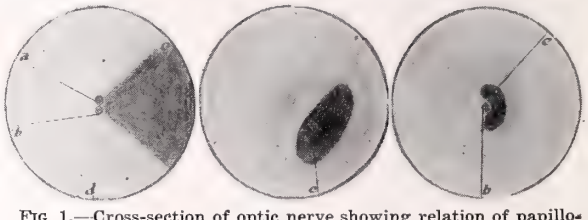

FIG. 1.—Cross-section of optic nerve showing relation of papillomacular bundle—(a) central artery, (b) central vein, (c) papillomacular bundle, (d) peripapillar fibres. I—Vascular portion. II—Avascular portion. III—Canalicular portion.

pieces of paper on the wall, about three feet apart, standing back twelve feet and converging on his thumb held eight inches from his nose. When we try this test, we wonder that Mariotte ever succeeded in getting the king, the thumb and the pieces of paper in the proper positions for a satisfactory demonstration.

Bernouilli used a slightly less crude method. He dropped a plumb line from one eye, keeping the other closed, and showed that the blind spot was elliptical, by pushing a coin along the floor. Donders was perhaps the first to actually measure the blind spot. He accomplished the feat by reflecting into the eye a small beam of light from a plane mirror. Following this, the perimeter was used for taking the measurements, and in

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*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, Texas, March 9, 1923.

1. Gradle, H. S.: An. Ophthal., 1916.

1890, Bjerrum advocated the use of his curtain. Since then, many complicated and expensive instruments have been devised for identifying and recording the blind spots. According to Fuchs, the blind spot lies from fifteen to sixteen degrees temporally to the point of fixation, is from seven to eight degrees high, and from five to six degrees broad. Gradle[2] gives the following figures: The exact centre lies 16° 33′ 32″ outside the point of fixation; the horizontal diameter measures 4°, 54′, and the vertical diameter measures 7°, 45′, with 2°, 58′ above and 4°, 47′ below, the horizontal line of fixation.

The projected size of the blind spot depends upon several factors, notably, the distance of the patient from the screen, the size and color of the test object and, to a certain extent, the patient's mental acumen. We have experimented with four different meth-

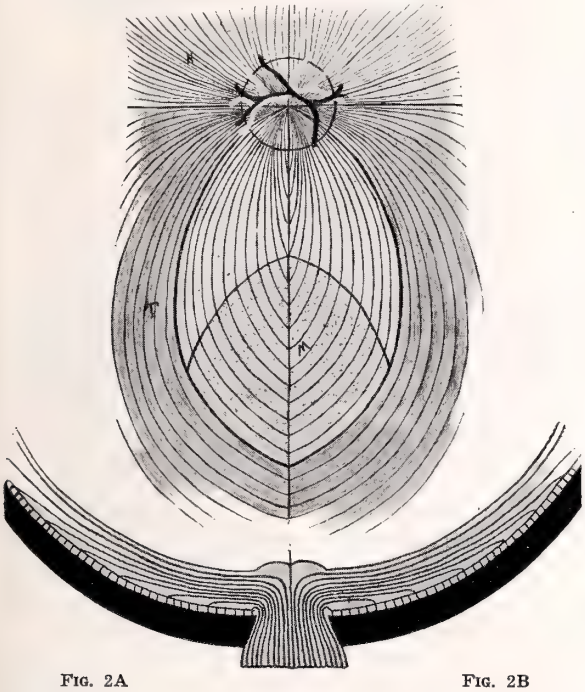

FIG. 2A FIG. 2B

Screen Findings of Glaucoma.

ods of taking blind spots, *viz.*, the tangent screen at one metre, the phoro-optometer at 27 cm., with Lloyd's stereoscopic charts at 19 cm., and with Peters' campimeter. The first two methods we first used under the direction of Dr. Conrad Berens, Jr., of New York City. We have finally adopted the first method for routine work, as it is the simplest and most accurate method we have. It possesses the added advantage of not requiring an expensive or cumbersome equipment. Gradle speaks of two sources of error in this method, and he has devised his magnet scotometer to overcome them.

2. Gradle, H. S.: An. Ophthal., 1916

His first objection is that the rod holding the test object distracts the patient's attention. This objection is a pertinent one, but we believe this source of error may be eliminated by plotting both from within outward, and from without inward. The second objection is that the markers used to outline the blind area, also distract the patient's

FIG. 3.—Roenne's Step.

FIG. 4.—Elliott's Sign.

attention. If black-headed pins are used, this fault may be eliminated.

The method we now use is as follows: The patient is seated in a chair with a comfortable head rest, so that the eye is one metre from the screen. This is the ordinary black Bjerrum curtain, or Duane's tangent screen, which is used for plotting the field of diplopia in muscle cases. Behind and above the patient, and giving a uniform illumination to the curtain, are two 50-candlepower, natural daylight lamps. The fixation object is a white-headed pin in the middle of the screen, on a level with the patient's eyes. A drop patch is placed over the eye that is not being tested and the patient is instructed not to hold that eye closed. We have found that patients will occasionally squeeze the eyelids together, rendering the fixation object so blurred as to make the test inaccurate. Sometimes it is quite difficult to get the patient to maintain fixation, and an intermediary fixation object, consisting of a small

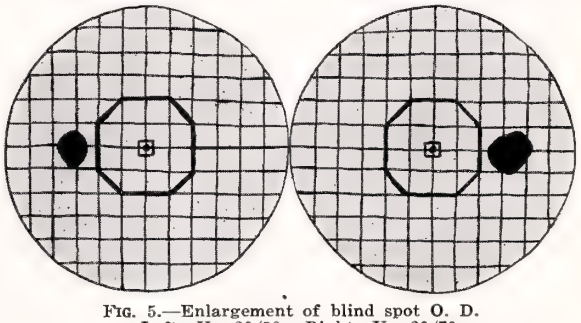

FIG. 5.—Enlargement of blind spot O. D.
Left—V.=20/50. Right—V.=20/70.

wire on a standard, which the patient lines up like the rear sight of a gun, is helpful. Occasionally, no matter how honestly we may try, a patient apparently can not maintain fixation upon the object. In such a case, it

is useless to attempt to measure the blind spot.

The patient is instructed not to move the head during the test, and to answer, "Now," or rap on the arm of the chair, immediately on the appearance or disappearance of the test object. This object consists of a 3 mm. white-headed pin, soldered on an umbrella stave. The spot is plotted first from within outward, then from without inward, marking

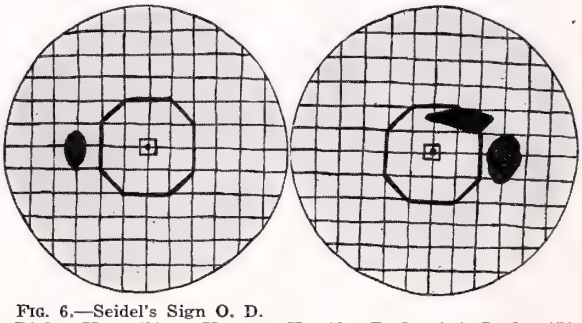

FIG. 6.—Seidel's Sign O. D.
Right—V=20/20—1. V.—200; H.—125; R. O.—165; L. O.—150.

the points where the test object appears and disappears with black-headed pins. First, the horizontal, then the vertical, and lastly, the oblique meridians, are plotted. Steady fixation fatigues the eye very rapidly, and the patient should be instructed to close the eye frequently during the observation.

It will be found that the areas overlap, the outer circle of pins representing the appearance, the inner row, the disappearance of the test object. The space between the areas is, according to Gradle, due to persistent after-images, or retinal drag. Von der Hoeve and Haycraft have designated this area as the penumbra, and its width depends to a great

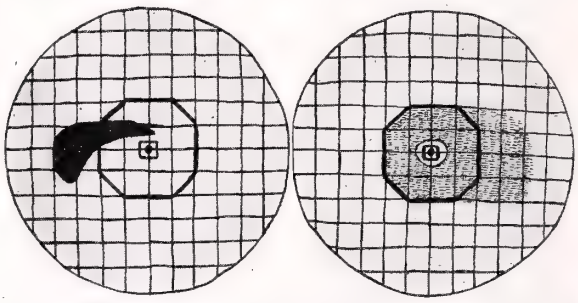

FIG. 7.—Left—Bjerrum's paracentral scotoma O. S. V.=20/50.
Right—Central fixation only, O. D.

extent upon the patient's mental acumen and quickness of perception. By this method we have found the average measurements of fifty normal blind spots at one metre to be as follows: Vertical diameter, 132 mm.; horizontal diameter, 103 mm.; right oblique, 113 mm.; left oblique, 110 mm.

This is the most convenient way of recording the measurements, but a more accurate way, and one by which the actual point of enlargement may be noted, is to designate the distance of the nasal and temporal border from the fixation point, and the projected blind area above and below the horizontal line of fixation. The screen is marked in five degree circles from the central fixation object, with small stitches of black thread. After plotting the blind spot, the test object is moved slowly in a semi-circle, beginning at the five degree mark and working outward

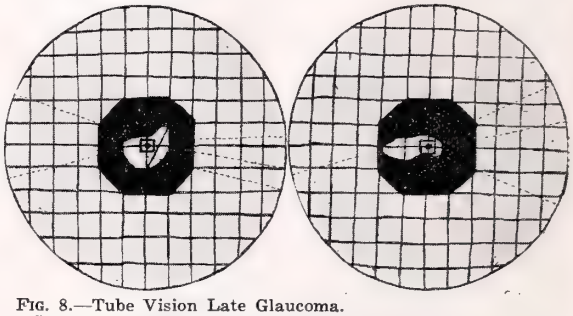

FIG. 8.—Tube Vision Late Glaucoma.
Left—O. S. V.=20/30. Right—O. D. V.=20/30.

to thirty degrees on the temporal side, then repeating on the nasal side. In this way, a scotoma of small size will be found. A rotating screen, such as that devised by Elliot of London and McCaw of Denver, is prefer-

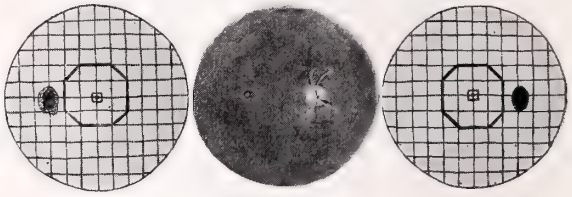

FIG. 9.—Medullated nerve fibres O. S.
Left —O. S. V.—145; H.—140; R. O.—150; L. O.—135.
Right—O. D. V.—125; H.—115; R. O.—110; L. O.—120.

able for finding small scotomata, and in cases of suspected glaucoma, Elliot advises the use of a small white test object for each degree on his screen. However, very good work may be done by the method just described.

In order to appreciate the value of blind spot records, it is necessary to review briefly the salient points in the anatomy and histol-

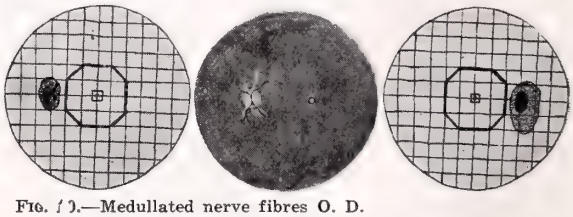

FIG. 10.—Medullated nerve fibres O. D.
Left —V.—165; H.—135; R. O.—175; L. O.—160.
Right—V.—260; H.—170; R. O.—215; L. O.—255.

ogy of the optic nerve and the nerve fibre layer of the retina. Samuelsohn[3], in 1882, by making serial sections of the optic nerve in a case of toxic amblyopia, demonstrated

3. Gradle, H. S.: An. Ophthal., 1915.

the course of the papillo-macular bundle as follows: In the vascular portion of the nerve, (Fig. 1), *i. e.*, the portion which contains the central vessels for the retina, the papillo-macular bundle forms a V-shaped sector, with the apex of the V in the centre of the nerve, and the bundle occupying about one-

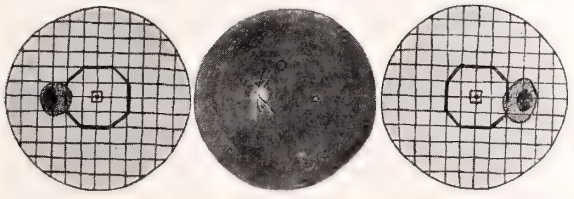

FIG. 11.—High myopia.
Left —10.50 S.=—.75 C.×45=V.—20/30.
Right— 9.50 S.=—.75 C.×90.

third of the total nerve-substance, on the temporal side. Further back, in the avascular portion, the bundle comes to lie midway between the centre and the periphery, becomes circular in contour, and occupies about one-fourth of the nerve. As it reaches the canalicular portion, the bundle assumes a flattened crescentic shape, and lies in apposition to the central vein of Vossius, near the centre of the nerve.

Fuchs[4] has shown that the peripapillar fibres, which supply the retinal area immediately around the papilla, form a thin sheath

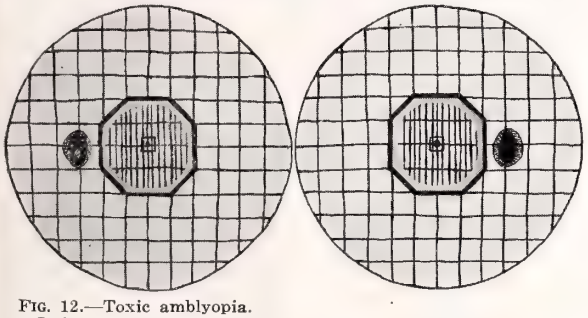

FIG. 12.—Toxic amblyopia.
Left —V.—140; H.—130; R. O.—135; L. O.—140.
Right—V.—140; H.—130; R. O.—135; L. O.—135.

around the periphery of the nerve, directly beneath the pia. Elliot[5], in his recent book on glaucoma, gives a graphic illustration showing the distribution of the nerve fibres in the retina (Figs. 2a and 2b). As the papillo-macular bundle occupies four-twelfths of the nerve-head on the temporal side, there remains to supply all of the rest of the temporal side of the retina only two-twelfths, one above, the other below. These fibres sweep around the macular region in a circular manner, to meet in a horizontal raphe. The probable explanation of the large part of the nerve-head occupied by the papillo-macular bundle, is that each cone in the macular region is supplied with a separate fibre, while in other parts of the retina one fibre supplies several nerve elements.

With these anatomical relations in mind, it is not difficult to interpret some of the findings which are puzzling otherwise. Pressure upon the peripapillar fibres at any point in the nerve trunk, will cause an enlargement of the blind spot, while any inflammatory or mechanical impairment of the papillo-macular bundle will produce a central scotoma. Elliot's explanation of the distribution of the temporal nerve fibres shows why we often get the Elliot, Seidel and Bjerrum signs, as well as the Roenne's nasal step, as early signs of glaucoma, rather than a simple enlargement of the blind spot.

Enlargement of the blind spot is found in the following conditions: Medullated nerve

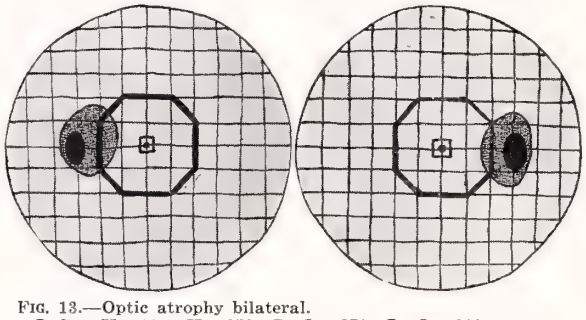

FIG. 13.—Optic atrophy bilateral.
Left —V.—305; H.—270; R. O.—370; L. O.—310.
Right—V.—320; H.—205; R. O.—240; L. O.—230.

fibres, myopia, glaucoma, optic neuritis, papilloedema, optic atrophy, sympathetic ophthalmia and, sometimes, in toxic amblyopia. We have recorded the blind spots in all of these types, except sympathetic ophthalmia, which condition we have had no opportunity to study.

We have studied the blind spots in six cases of medullated nerve fibres. As this condition can scarcely be regarded as pathologic, the findings are of only didactic in-

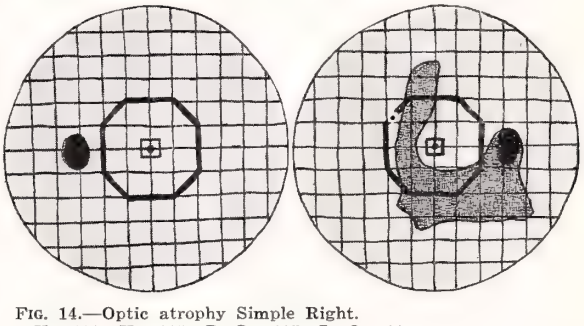

FIG. 14.—Optic atrophy Simple Right.
V.—130; H.—115; R. O.—115; L. O.—115.

terest. Of these six cases, all showed enlargement of the blind spot in the affected eye (Figs. 9 and 10). In only one case, however, did the area of enlargement correspond with what we might expect from the fundus picture, according to the law of projection. It

4. Fuchs, E.: Text Book, 1905.
5. Elliot: Diagnosis and Treatment of Glaucoma, 1922.

seems probable, as Gradle has explained, that the enlargement depends upon the thickness of the medullated fibres overlying the retina and occluding the incidental light. We have recorded the blind spots and scotomata in many cases of glaucoma, and in stages varying from a moderate enlargement of the blind spot, to a contraction of the fields to the so-called "tube vision." An interesting feature of these cases, is the maintenance of good central vision, in the presence of large scotomata or greatly contracted fields.

We have been able to demonstrate all of the earlier signs of glaucoma on the Bjerrum curtain, except Elliot's sign. It is probably necessary to use a rotating screen with a

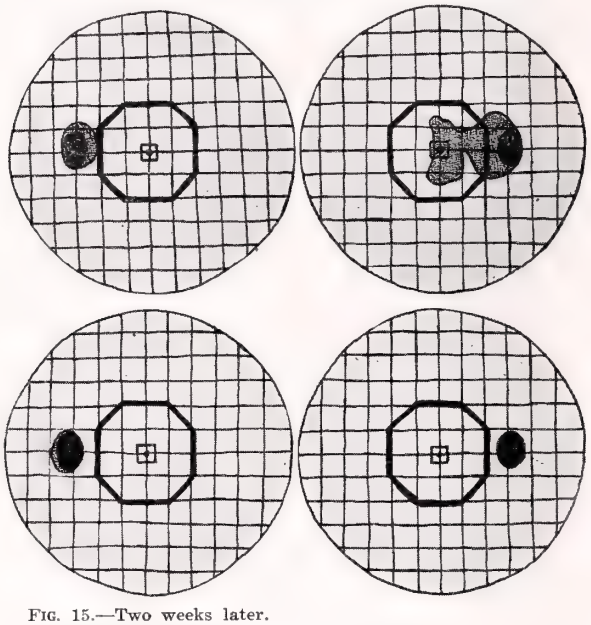

FIG. 15.—Two weeks later.
V.—185; H.—130; R. O.—190; L. O.—160.

one-millimetre test object, rotated at each degree within the twenty-six degree circle, to demonstrate the jagged scotoma that Elliot[6] describes. The anatomical arrangement of the nerve fibres as they cross the edge of the disk, and their ultimate distribution to the retinal elements, as shown in Fig. 2b, taken from Elliot, explain how injury to the fibres from pressure against the sharp edge of the scleral canal, may produce the various scotomata found.

Figures 3 and 4 show, respectively, the Elliot and Roenne signs, and are taken from Elliot's work on glaucoma. The other illustrations (Figs. 5, 6, 7 and 8) are all from our own work, and are examples of fields we have found in various cases of glaucoma. This is a most excellent method of keeping up with the progress of a case of glaucoma, by taking from time to time actual measurements on the screen. The same may be said of any other condition affecting the blind spot or visual field. We have pointed out, in a previous paper[7], that the recording of the blind spots is one of the most valuable methods of diagnosis and prognosis in glaucoma following cataract extraction. In this unfortunate type of case, the perimeter is of no use, because of the aberration produced by the correcting lens.

In myopes of low degree, there is no change in the size of the blind spots. In fact, the increase in size depends upon the retinal changes surrounding the disk, and the enlargement is commensurate with the changes demonstrable with the ophthalmoscope. The chief direction of enlargement is from the nasal border toward the point of fixation, as might be expected from the temporal conus of myopia (Fig. 11). In high myopes, who can not be corrected to at least 20/100, it is necessary to use a larger test object than the usual one.

We have had an opportunity to examine but one case of toxic amblyopia. There was in this case a moderate, symmetrical enlargement of the blind spots, with central scotoma for red and green, extending for ten degrees each way from the point of fixation (Fig. 12). It is interesting to note that Vossius explains this central scotoma as being due to the fact that in the canalicular portion of the nerve, the papillo-macular bundle is adjacent to the capillaries, and therefore more liable to toxic influences than the peripheral bundles, where only small arterial branches are found.

Cases of optic neuritis usually show a more or less diffuse enlargement of the blind spot, and may show various types of scotomata. The same is true of optic nerve atrophy (Figs. 13 and 14). A number of cases of sinus disease examined by us, have given little evidence of optic nerve involvement, except in those cases which show disease ophthalmoscopically. We have not been able to substantiate the claim of certain authorities, that disease of the sphenoid and posterior ethmoid cells causes enlargement of the blind spot in a high percentage of cases, though our experience in this type of cases is limited.

In conclusion, we wish to say that the method outlined here is one of the most useful for functional testing. It is simple and inexpensive, and gives information that can be obtained in no other way. To those who would make a study of blind spots and scotomata, we heartily recommend it.

6. Elliot: Diagnosis and Treatment of Glaucoma, 1922.

7. Ralston, W., and Goar, E. L.: Glaucoma Following Cataract Extraction, Southern Medical Journal, Vol. XV, No. 7.

REFLEX SYMPTOMS FROM EYE-STRAIN.*

BY

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Eye-strain is the unfortunate and inexpressive term that is used to describe the results of the attempt of the eyes, brain and correlated organs, to neutralize the defective function of optically imperfect eyes. The optical defect is not morbid, and has no relation to morbidity. Its secondary effect, the straining of muscles and nerve centers, is not in itself pathologic, but illustrates the great truth which text-books, teachers and medical science, are prone to forget—that abnormal physiology is the origin of most pathology. Unnatural action and overaction, start the morbid function, which finally ends with the postmortem table.

I often wonder if we, as physicians, are not too frequently guilty of overlooking and failing to appreciate, how closely associated the eyes are to the central nervous system, and how frequently we are able to clear up the diagnosis of many obscure conditions, which otherwise could not be done, by having the eyes thoroughly examined. This does not mean merely whether or not a given patient can read 20/20. It is often the case that patients who are having all kinds of reflex symptoms from eye-strain, can read 20/20, and even better. There is nothing more absurd than to tell a person that his eyes are all right and that he does not need glasses simply because he happens to have what is termed "a normal vision." I think there are very few if us who have not been guilty of making this mistake. It is being made daily in the regular routine examination of school-children throughout this country. As a result, there are thousands of children in the schoolroom today, denominated "Class C," unable to make their grades, looked upon as mental deficients, punished for truancy and other bad conduct, and who too often land in the juvenile courts, city jails or the so-called State Reformatory.

This is the day of sterilization, eugenics, social hygiene and preventive medicine. The school children have their throats examined, and diseased tonsils and adenoids are removed and trachomatous bodies scraped off their lids—all of which is a wonderful thing, yet if we could carry this work a step farther, and examine their eyes for errors of refraction, there would be a far smaller number of "Class C" pupils and fewer mental delinquents. The work of the probation officers and juvenile courts would be very materially decreased, and the so-called State Reformatories relieved, to a great extent, of their over-crowded conditions.

Dr. Cronin, who at one time was chief of the division of school inspection of the New York Department of Health, says:

"Physical defects of one sort or another, are the cause of bad habits, truancy and moral obliquity, and in later life it is the physical defectives who leave school early or become hopeless truants. Truancy and mental delinquency are the first stages of a criminal career, and by improving the physical and mental condition of children, we have saved many of them from the downward path."

Refraction of the undervisioned child, the mentally defective, the backward or very young child, requires the greatest skill of the experienced oculist, and is wholly beyond the skill of the optician or the oculist of little experience in the use of the retinoscope. This work calls for the constant use of "skiascopy" or the "shadow test," by which the measurement of the refraction of the eye is made without any assistance from the child, as these classes of children can be of but doubtful assistance to the oculist.

Dr. M. B. Beals, supervising oculist, Bureau of Child Hygiene in the New York Schools, says:

"Wonderful results have been obtained in that department through the combined efforts of the principals, teachers, medical inspectors and nurses, after special instructions by the supervising oculist. A large number of children with vision in the better eye of 20/70 or worse, were found, and over 900 returned to school with practically normal vision, after treatment or refraction. These children had already been through the regular routine of school medical inspection.

"In a group of 400 'habitual left back' children found in one of the large schools, more than 100 had decided refractive errors. Glasses were prescribed for 110; 100 of this number procured the glasses, and in less than three months, we saw some very agreeable results. Out of the 100, 98 of the 'habitual left backs' passed the regular school grade examination. Of the ten who did not have their prescription for glasses filled, only one was promoted. Out of 132 ungraded or mentally defective children who were refracted and given glasses, 34 were found to be normal mentally, after relieving their eye-strain and giving them vision, and more than 65 per cent showed decided mental improvement, and many showed physical improvement.

"One child, 9 years old, always in an undergrade class, had never been able to read or write, and was of such a vicious temper that constant care was necessary to prevent her from injuring other children of her class. She also suffered from severe nervous symptoms of a choreic nature. Within two months after her eyes had been refracted a most remarkable change had occurred. She made rapid progress in all branches of her work, but the most striking change occurred in her nervous system. From a vicious, dangerous child she changed to a happy, lovable little girl, and her pronounced symptoms disappeared. After six months, this child lost her glasses and was without any for two months.

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, Texas, March 10, 1923.

During this period, the child relapsed completely; she could not read or write, and was unable to get any mental concentration. She again became vicious tempered and all the neurotic symptoms returned. At last, glasses were again procured, and the picture again reversed itself in its entirety, as on the first occasion."

Refraction is the most scientific problem the specialist has to deal with. It cannot be mastered in six or eight weeks, as many would have us believe, nor is it limited to placing a glass before the eye that will enable it to read 20/20. It is one of the most complicated and difficult fields of medical practice. Competence in ophthalmology demands as a foundation the broadest knowledge of medicine and surgery, yet there is not a subject within the domain of medical science that is so grossly neglected by the teaching staffs of the medical colleges and post-graduate schools. Our text books devote very little space to errors of refraction, or eyestrain, and there is very little said on the subject in the thousands of current medical journals. When I began to scan my medical journals, hoping to find something that might be of some aid to me in getting up this paper, I failed to find a single article on the subject. If I should happen to say something of interest, you may rest assured that I did not get it from a medical journal.

Errors of refraction are largely on the increase, first, as a result of the greater demands made upon very young children by the educational systems of the present day, and, second, because of heredity. Insanity and suicide are also largely on the increase, numerically and proportionately. May there not be a connecting link between these facts? Were I to assert that errors of refraction are responsible for a large proportion of the suicides, drug addicts, alcoholics, neurasthenics and insane that the internist is seeing daily, I would probably be held up to ridicule. Those of us who do a large amount of this work see the effects of uncorrected errors of refraction on the nervous system, and are impressed with the great frequency of such symptoms as insomnia, irritability, depression, impaired memory, difficulty of concentration of thought, lack of self-confidence, apprehension, weariness and exhaustion, and a general lack of stability of the nervous system. We have often heard patients remark that they were afraid they were losing their minds, or were tempted to commit suicide, because of extreme nervousness, or because of headaches they have been trying for years to have relieved. Many of us recall instances where sufferers have turned to narcotics or alcohol for temporary relief, and no doubt, this has led to much of the secret use of drugs or alcohol, which prevails to so great an extent today. In view of the large number of suicides attributed to alcoholic excess, ought we not to look upon intemperance as a disease, and always try to find out the circumstances attendant upon its beginning, and whether or not it might be due to a relievable cause? We would often be able to trace it to such conditions as I have described, and the presence or absence of errors of refraction would be a most important point.

The truly distressing condition of some of these neurasthenics suggests strongly that a complete nervous breakdown, if unrelieved, may eventually lead to a mental breakdown. A thorough investigation of the previous history, and a very careful examination of the refraction, would probably result in some of the forms of insanity being traced to the early manifestations of nervous troubles which have been shown to be due to eyestrain.

The old superstition, through which almost all of the diseases of women were traced to the sexual organs and functions, is fast giving away to views more in correspondence with the facts. That puberty and menstruation should inaugurate a host of terrible evils, and the menopause another legion, is at least contradictory. A name that could be applied to many disorders of menophania and puberty, is "astigmatic eyes"; and for supposed menopausal woes, "presbyopia." To say the least, the eyes will be found responsible for quite a large number of the hysterical and neurasthenic symptoms occurring at these particular stages of life.

Another condition to which I might call attention, perhaps thereby subjecting myself to even more criticism, is scoliosis or lateral curvature of the spine. It has been demonstrated that in some of the European cities over 25 per cent of the school-children have lateral curvature of the spine. The percentage might be equally high in this country, if the children were examined for these conditions. Many writers, after listing a number of causes, such as inequality of the length of the legs, paralysis, thoracic disease, traumatism, organic disease of the spine, sacroiliac disease, occupation, heredity, etc., confess that in the greater number of cases there is no certainty as to etiology, and these are usually designated as "Idiopathic," which is, of course, a frank confession of lack of knowledge.

Any cause that keeps the head tilted to one side all the waking hours of youth, might result in lateral spinal curvature. Such a cause is a certain axis of astigmatism in the dominant eye, not compensated for by that

of the other eye. An axis of astigmatism in the dominant eye of from ten to twenty degrees to either side of 90° or 180°, while the axis in the other eye remains normal or asymmetric, produces head-tilting, in order to bring the abnormal axis of astigmatism to 90 or 180 degrees, whichever the cause might be. This, to my mind, is perfectly plausible, and is no doubt responsible for a large percentage of the cases of lateral curvature of the spine.

Of the various neuroses arising from errors of refraction, or eye-strain, headache is probably the most frequent and disturbing. There is no special characteristic by which eye headaches can be diagnosed. They may be located in any part of the head, and vary in intensity from a dull aching or a sense of weariness, to an intense pain, often with retching and vomiting, which completely prostrates the patients, the effects of which sometimes last for days, and which is designated "sick-headache, or migrain."

It is rather interesting to read what some of our old writers have to say about this ancient affliction, which seems to have existed since the creation of women, in its so-called typical or in its multitude of atypical forms, and which is but one of the many manifestations of eye-strain. In their voluminous description of this malady, and their description of its onset and the various conditions leading up to it, a more beautiful picture of eye-strain could not be drawn. The old observation that women are more subject to the disease than men is explained by the fact that women, as a rule, have always done more near-work with the eyes than men—sewing, cooking, weaving, reading, etc. Whenever men pursue such occupations, the disease is as frequent, proportionately, possibly modified slightly by their greater temperamental resistance to neurological conditions.

Osler says that dyspepsia is the besetting malady of this country, due to improper diet, etc., although modern food is many times more certain in amount and better in quality than ever before. It does seem that gastric and nutritional diseases have increased inordinately. What is the cause of this contradiction?

Dr. Robert T. Morris, of New York City, whose character and professional standing need no setting forth, writes as follows:

"A very large group of cases of intestinal fermentation is dependent upon eye-strain. These cases are, perhaps, quite as often overlooked as any others, but as soon as we have all become familiar with the external signs of eye-strain, fewer cases will get to the surgeon with the diagnosis of abdominal disorders. Those that I see are sent to the office most often with the request to have the appendix examined, because the distension of the cecum is apt to cause more pain than distension of other parts of the bowel, and the attention is attracted to this region. Where there are any evidences of eye-strain, these cases are referred to the ophthalmologist, along with my cases of nervous dyspepsia and gastric neuralgia; and some of the most brilliant results that I have observed in any kind of medical practice, have come out of the treatment that was instituted."

The books and monographs speak of the great incidence of the affection among the upper classes, the liberal professions, men and women of letters, etc. This only means that such people read and write more than others. We seldom hear of sick-headache or migraine occurring among farmers, policemen, firemen, soldiers, ranchmen, trainmen, sailors, etc., but among seamstresses, stenographers, typesetters, copyists, sewing-machine girls, weavers, etc., the disease is as common as among students, literary workers, and educated people. Along with the headaches, come the gastric manifestations, which vary in intensity from a sensation of slight nausea to extreme retching, which may or may not be accompanied by vomiting, pareses and paresthesias of various kinds, such as disorders of sensation and touch and transient paralyses of the ocular muscles, producing diplopia, or double vision.

But the profoundest evil is the dejection and disgust with life that follows the persistent use of uncorrected astigmatic eyes. It is so characterized in a number of books, written by some of our best and oldest authors. It is quite pathetic to read the biographies of some of these great men, who were victims of the dreaded malady called eye-strain. Symonds says:

"My eyes got worse at Oxford. Cannot read or look out of the window when riding the train, nor can I read at night. Pain, weakness and aching eyes! Brain so troubled! The day's headache has begun, and I must stop. My tired brain and eyes occur daily. Nervous irritation amounts, at times, to insanity. Skepticism is in my spirit. In my sorest needs, I have had no actual faith, and have said to Destruction, 'Thou art my sister'."

Taine says in his Biography:

"I have a bad headache this moment, and am incapable of serious thoughts. It often happens to me, to fall into a state of languid depression, during which I spend hours in bed or in my arm chair, in that sort of a mental prostration so dreary and oppressive, which you know. My head aches with work. I am in the dumps. It happens to me when my head aches. My aching brain prevents me from finding relief in my work. When I do not have headache, I write. A poor machine out of repair. If I may believe the medical men, a race little to be trusted, I shall be better in a month."

EARLY DIAGNOSIS AND TREATMENT OF SQUINT.*

BY

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Strabismus is more common than is generally believed. The onset of the disease is so slow, and the early recognition and treatment is so valuable, that a little more method and precision should be applied in the study and treatment of this ailment.

The laity needs more first hand information regarding squint, and the advantage of early attention. A small percentage of children who grow up with strabismus, quit squinting without outside aid. They are said to "outgrow" cross-eyes. De Schweinitz says that one might as well tell the public that there is hope of a child outgrowing club-foot or a hare-lip. In these rare cases we find that the eye that previously deviated is left with its sight weakened, and accurate binocular vision is seldom restored.

Whatever the cause of squint, whether an error of refraction, unawakened fusion centers, amblyopia, or what not, it is certain that faulty muscles are the real cause of most cases. The majority of eyes remain free from squint, no matter what the state of vision, the refraction, or other physical conditions may be.

I shall confine myself, in this discussion, to convergent strabismus in children.

Up to the sixth month of life, the motor co-ordination power keeps the eyes parallel, then the fusion power begins to develop, being usually complete at the end of the sixth year. Between these ages is the time for observation and treatment of tendencies away from parallelism.

In many cases, squinting is at first noticed only when close objects are looked at. This condition may remain through life, but usually, when the attempt at accurate and long fixation begins, a greater strain is put on the accommodation, and a child with a good deal of hyperopia or astigmatism develops spasmodic esophoria, which is marked for near vision when his convergence is called into play, but which is slight, or not marked at all, for distance. In the course of time, this deviation increases until binocular fixation is given up and convergent squint remains.

With rare exceptions but one eye squints. This does not imply, however, that only one eye is concerned in the defect, nor does it follow that the "fixing eye" possesses a better muscular system. In some cases the "squinting eye" alternates. In this condition, we realize the best results from corrective work in betterment of sight and cosmetic effect.

Strabismic children are usually irritable and nervous, and may become actual neuropaths. These reflex symptoms are more pronounced when the deviation is so slight that the patient can overcome it by constant effort. And this is the type that is so often neglected. Ordinarily, a diagnosis of squint can be made at sight, and yet these slight conditions do remain unnoticed indefinitely. The treatment of squint is not a question of employing new methods, but it is a question of utilizing the old ones to better advantage and of co-ordinating therapeutic and clinical instruction.

The work of treating strabismic children is particularly delicate and trying, because the chief concern of the parent is usually to correct the deformity as soon as possible, looking toward cosmetic effect only; and the treatment is long and hard, demanding constant vigilance and patience, together with complete co-operation on the part of the doctor and the parent. After an exhaustive study of each case, in order to determine the nature, degree and contributing factors as regards both the eye and the patient, the non-operative treatment should be given a fair trial in all suitable cases. This covers the usual refraction, training exercises, and general health measures. The correction of faulty fusion is rarely successful, because of the immaturity of the patient at the time the treatment would avail.

Glasses may be worn by children as young as one and one-half years, and this is never too early to prescribe a correction for an error of refraction in a developing squint. Where a very young child will not wear glasses, the bandaging of the sound eye each day for a few hours, or the use of atropin every other day, should be kept up until it is old enough to wear correcting lenses. At that time it should have convex glasses which completely correct the hyperopia, even if the eyes are straight at times but crossed at other times, and no matter what angle of deviation obtains. However, correcting lenses seldom have any effect upon a squint deformity of over 15 degrees, if the eye that turns has remained in malposition for several months. If the wearing of glasses is to accomplish its object, it must be kept up continuously, and must be reinforced by exercises which force the squinting eye to perform fixation for several hours each day.

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The value of this early non-surgical treatment can scarcely be overestimated. If it fails to correct, it has usually prepared the field for surgical intervention. Without this treatment, an operation results more in cosmetic than in visual betterment. According to most authorities, if a child is under proper treatment, there need be no hurry about surgical intervention, except for the cosmetic effect.

THE SURGICAL CORRECTION OF SQUINT.*

BY

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Squint can, perhaps, best be defined as a disharmony between the movements of the anterior poles of the two eye globes, produced by the action of the extrinsic ocular muscles, when viewing a given point in the fields of vision.

Squint may be classified as (1) Paralytic, and (2) Non-paralytic. The latter is a manifest concomitant squint, and may be subdivided into (a) Monocular, and (b) Alternating.

The etiology of paralytic squint is implied by its name. The cause of the non-paralytic is not so clear. From "Systematic Writers" we read as follows:

"Among infants having strabismus, some have good vision in the two eyes, about equal in each; among others the squinting eye presents a true amblyopia. Such diminution in vision (when there is no visible lesion in the eye, externally or internally), is considered a consequence of the squint, the eye that saw well one day, and from that time its vision diminishes. This reduction in vision is explained on the ground that the deviating eye, finding itself out of use, loses its physiological retinal function."

The existence of this amblyopia ex anopsia, has been admitted without discussion by practically all ophthalmologists, but I believe that a reversal of statements would be more nearly correct, and explicable on the ground that an eye will and does deviate because it does not see clearly, and not that the eye does not see clearly because it has turned from the normal axis. It is a known fact that the fusion-sense or the power of binocular vision does not develop completely until after the seventh year of life. Practically all non-paralytic squints become manifest before the seventh year, usually about the third year.

When with the right eye covered a child sees an object, and with the left eye covered he sees the same object, and then with both eyes uncovered he sees the same object, in the same position, just as clearly, but singly, he has both mon- and binocular vision, and his fusion-sense is normal. With the vision in the right eye normal and in the left eye subnormal, the visual impression gained through the normal right eye, singly, will be clear; that gained through the subnormal left eye singly will be blurred; with both eyes open and the fusion-sense developed, the visual centers will superimpose a blurred image over a clear image, and the total image will be blurred, unless there is suppression of the blurred image, gained through the more defective eye. It is not only the quantity but also the quality of vision, that we must consider, especially in strabismus cases, with equal or nearly equal visual acuity in the two eyes.

In my usual examinations for visual acuity, I use the test-figures that are familiar to the eyes, such as numerals, letters, reversed letter "E," pictures of birds, fish, animals, or toys. With the correct lense before the squinting eye, the object viewed can be seen clearly enough for quick recognition; the same is true of the straight eye with correction. However, upon questioning the intelligent patient about the quality and similarity of the images gained through each eye separately, the answer will invariably be that the separate images of monocular vision are dissimilar, but that the binocular image is similar to the monocular image gained through the straight eye, singly. This emphasizes the statement that clear single binocular vision results from suppression of the image gained through the subnormally seeing eye, by causing the defective eye to deviate from the normal axis of fixation.

Covering the clearly seeing eye will cause the formerly squinting and subnormally seeing eye to assume a normal axis of fixation. Again, some of these squints will straighten under the influence of a cycloplegic, that is, when the near and distant vision are blurred.

Paralytic cases are never operable. Alternating cases are disappointing too often, except in the very young, because of the annoying double vision which follows. Therefore, it is in the non-paralytic, manifest, concomitant squints that we hope for the best results. Before attempting to correct a squint by operation we should know: (1) Whether the squinting eye is in a state of amaurosis or amblyopia ex anopsia; (2) the exact degree of deviation in the squinting eye; (3) that the squint is not paralytic and preferably not alternating; (4) the exact measure of the refractive error under cycloplegia of both eyes; (5) whether or not there is fixation in the squinting eye; (6) whether

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, May 10th, 1923.

or not the squinting eye straightens under cycloplegia. (If it does, then with the wearing of proper lenses we can hope for correction without an operation. If not, then an operation is the only means of relief), and (7) the normal interpupillary distance, determined by Alcorn's method.

The danger of operating on very young children has been greatly exaggerated; and it is the age from two to six that predisposes least to secondary deviation. It is a grave mistake to sit idly and futilely by, waiting for time to correct this unsightly and crippling deformity. There is just one class of squint that ever outgrows deformity, the very small percentage that straighten under the influence of a cycloplegic and the wearing of lenses. All the others remain and become more manifest, with greater loss of visual acuity, unless corrected by some surgical procedure, such as tenotomy, advancement or resection. After the second year, if the squinting eye does not straighten under cycloplegia and glasses, an operation is indicated; and after the operation, the selected optic exercises or ocular calisthenics should be practiced.

I wish to protest against the practice of doing a simple tenotomy of the apparently too strong or too short muscle. This applies to all ages. If we follow up the very young who have been simply tenotomized, we find that a large percentage will have developed a secondary or an opposite deviation in later years. The same is also true of tenotomy done to correct squint in the older amaurotic, or amblyopic eyes.

Dr. James G. Alcorn of Columbus, Ohio, in April, 1922, published his first report on a very practical method, devised by himself, of determiniing the normal interpupillary distance for the squint patient and, so far as I know, this is the first advice we have had how to know before operation what the interpupillary distance after operation should be. He says:

"Measure from the outer canthus of the patient's left eye to the inner canthus of the other eye, in the following manner: Have the patient look slightly upward, so that the eye lids are well separated, and allow the point of the pupillometer to come almost into contact with the muco-cutaneous junction, at the same time steadying the instrument against the side of the head with the second finger. This will bring the other point of the pupillometer in direct line with the inner canthus of the right eye, and the exact measurement can be taken. If not satisfied with the measurement, prove it by carefully taking the measurement between the two outer canthi and add that of the distance between the two inner canthi and divide the sum by two. If the result is the same as the first measurement, you are correct; if not, take the measurements over again until they correspond."

I have been following Dr. Alcorn's suggestions, taking the measurements of 100 faces to develop accuracy and judgment. At first I used Alcorn's pupillometer, but lately I have found it more accurate and convenient to use a male caliper with bent legs and a millimeter rule. I can lay the points of the caliper in absolute contact with the muco-cutaneous line. I have arrived at the following conclusions from these measurements: (1) Alcorn's rule is not only practicable, but it is absolutely accurate; (2) the measurements on the two sides of the face are remarkably symmetrical; (3) the interpupillary distance will vary from 55 to 65 mm.; (4) the average adult interpupillary distance is 61½ mm.

In the series of cases reported here, I have followed the basic teaching of Reese—to lengthen or weaken the overacting muscle, and shorten or strengthen the underacting muscle. A guarded tenotomy has been done on the short or overacting muscle, and its fellow muscle in the other eye. On the too long or too weak muscle, two methods have been used, the resection and the tucking.

CASE REPORTS.

Case No. 1.—H. W., age 23 years, had had a manifest squint of the right eye since infancy. Glasses fitted by an oculist three years ago, were worn only one week. He had 30 degrees of nasal deviation of the right eye. All media were clear and the fundi were normal. Refraction showed: ODV. 20/40 H. 20/40 w plus .25 plus 75 x 75=20/30; OSV. 20/20 H. 20/30 w plus .25 plus 50 x 90=20/20. A Reese resection of the external rectus and a partial tenotomy of the internal rectus, of the right eye were performed, and also a partial tenotomy of the internal rectus of the left eye. The sutures were allowed to remain for 12 days.

Case No. 2.—A. B., age 15 years, had shown a manifest squint of the right eye since 3 years of age. She had worn glasses for the last 20 years but had undergone no operation. All media of both eyes were clear. Refraction showed: ODV. 20/20 A. 10/200 plus 4.25 plus 25 x 75=20/20; OSV. 20/200 A. 5/200 plus 2.25=20/200. In this child the amblyopia had advanced to such a degree that lenses would not produce an image of sufficient clearness in the two eyes to stimulate harmony of action in the extrinsic muscles, even though she had worn glasses since 6 years of age. The squint remained manifest, with constant reduction of vision, until at the age of 15 vision in the left eye could be brought up to only 20/200, with correct lenses. If these eyes had been rendered parallel by an operation as soon as the squint became manifest, and the proper lenses had been prescribed, the vision would have been much clearer than 20/200, in addition to the straight eyes that would have resulted. On August 18, 1916, under cocaine, a guarded tenotomy of the internal rectus of the right eye was performed, and also a Reese resection of the external rectus and a guarded tenotomy of the internal rectus, of the left eye.

Case No. 3.—C. A., aged 36, had shown a divergent manifest squint of the right eye since 3 years of age. She had worn glasses for the last 20 years but had undergone no operation. All media of both eyes, and the fundi were found to be normal. Refraction

showed: ODV. 20/200 H. 20/200 plus 1.00 plus 75 x 90=20/200; OSV. 20/20 H. 20/40 plus .75 plus 50 x 90=20/20. The right eye showed 25 degrees of divergence, and the left eye 15 degrees of divergence. Under homatropine, both eyes looking into the distance diverged 15 degrees, but at the near point, the left eye fixed first and then the right eye would pull into fixation; this occurred notwithstanding the patient had never complained of or noticed diplopia. On August 29, 1916, a Reese resection of the internal rectus and a guarded tenotomy of the external rectus, of the right eye, were performed, with a guarded tenotomy of the external rectus of the left eye.

Case No. 4.—C. D., 9 years of age, had shown a manifest, alternating, convergent squint, more constantly in the left eye than in the right, since the age of 3. Several eye examinations had been made, and he had worn glasses for short periods without improvement. He had undergone no operation. All media were clear and the fundi were normal. There was 30 degrees of convergence of both eyes, and the alternating convergence did not lessen under cycloplegia in either eye. Refraction showed: ODV. 20/20 H. 20/100 plus 2.50=20/30; OSV. 20/40 H. 20/200 plus 2.00 plus 1.00 x 105=20/30. On November 14, 1919, under ether anesthesia, a Reese resection of the external rectus and a guarded tenotomy of the internal rectus of the both eyes, were performed. The patient left the table with a definite over-correction of both eyes. The sutures were allowed to remain 10 days. The over-correction of 5 degrees remained manifest in the right eye for 6 months, but during the first month after operation, the patient complained of lessening diplopia, which entirely cleared.

Case No. 5.—W. F., age 21, had shown manifest divergent squint of the right eye since 3 years of age. He had never worn glasses or undergone an eye operation. He desired improvement of sight and straightening of the eye, in order that he might enter the army. All media were found clear and the fundi normal. There was a convergence of 20 degrees in the right eye. Refraction showed: ODV. 4/200 H. 2/200 plus 1.50 plus 50 x 75=6/200; OSV. 20/20 H. 20/40 plus 37 plus 37 x 105=20/20. The deviation did not lessen under pupillary dilatation. On September 10, 1917, under cocaine anesthesia, a guarded tenotomy of the internal rectus and a Reese resection of the external rectus of the right eye, were performed, and also a guarded tenotomy of the internal rectus of the left eye. A very thin but broadly attached external rectus tendon and thick internal rectus tendon, were found at operation. The sutures were allowed to remain one week.

Case No. 6.—L. W., colored, age 18, had shown a manifest convergent squint in the left eye since 2 years of age. She believed that the cross-eye developed as a result of imitating a playmate who was cross-eyed. She had had no operation, nor had she worn glasses. All media were clear and the fundi normal. There was a 35-degree convergence of the left eye. Refraction showed: ODV. 20/20 H. 20/70 plus 1.50 plus 50 x 90=20/20; OSV. 20/50 H. 20/100 plus 2.00 plus 50 x 90=20/40. The convergence did not lessen under dilatation of the pupils. On August 3, 1918, under cocaine anesthesia, a guarded tenotomy of the internal rectus of the right eye, and a guarded tenotomy of the internal rectus, and a Reese resection of the external rectus of the left eye, were performed. The sutures remained in for 8 days.

Case No. 7.—G. S., age 7, had shown a manifest convergent squint of the left eye since he was 3 years old. He had undergone no operation, but had worn glasses for the last two years; that is, he began the use of glasses at the age of 5, or just 2 years before he completed the development of his fusion sense, and too late for help from the use of lenses. All media were clear and the fundi were normal. The left eye turned toward the nose 25 degrees, manifestly and constantly. Refraction showed ODV. 20/50 H. 15/200 plus 3.25 plus 2.00 x 90=20/40; OSV. 20/100 H. 10/200 plus 3.25 plus 2.50 x 90=20/70. Under dilatation of the pupils, the convergence of the left eye did not lessen. On July 25, 1916, under ether anesthesia, a partial tenotomy of the internal rectus of the right eye was performed, and also a partial tenotomy of the internal rectus and a Todd tucking operation of the external rectus, of the left eye. The sutures remained 7 days.

Case No. 8.—R. B., age 10, had shown a manifest, convergent squint of the left eye for the last 3 years, following an air rifle injury to the eye, which had produced a central perforation of the cornea and prolapse of the iris. He had a traumatic, complete cataract and distortion of the pupil upward. He had never worn glasses, nor had an operation for the correction of the squint. All media were clear, and the fundi normal in the right eye. There was 25 degrees of convergence of the left eye, and its temporal rotation was limited to 30 degrees. The reduction of vision in the left eye had a visible pathological cause, which began at the age of 7, at the time we usually expect the fusion sense to be developed. This child developed a convergent squint from the seventh year onward. On August 3, 1916, under ether anesthesia, a guarded tenotomy of the internal rectus of the right eye, was performed, and also an almost complete tenotomy of the internal rectus and a Reese resection and external rectus, of the left eye. The sutures were allowed to remain one week.

Case No. 9.—L. A., age 23, had had manifest convergent squint of the right eye, since 4 years of age. She had never worn glasses or had an operation. All media were clear and the fundi were normal. The right eye showed a constant convergence of 25 degrees. Refraction showed: ODV. 20/70 H. 10/200 plus 4.50 plus 3.50 x 65=20/50; OSV. 20/70 H. 10/200 plus 5.00 plus 3.00 x 110=20/50. On August 22, 1919, under cocaine anesthesia, a guarded tenotomy of the internal rectus and a Reese resection of the external rectus, of the right eye were performed, and also a guarded tenotomy of the internal rectus of the left eye. These sutures were allowed to remain 6 days.

The next three cases are interesting, in that a boy and his two sisters have been similarly troubled since infancy, with "weak eyes," dancing eyes and convergent squint. In this family, there were 6 children, 3 with normal eyes and 3 with defective eyes. The father was similarly troubled. The dancing, or nystagmus, was alike in the 3 affected children, rotary; the squint was also similar, in that it was convergent in each, but the right eye was affected in the 2 girls, and the left eye in the boy.

Case No. 10.—E. S., age 7, had had weak eyes and convergent squint since infancy. On examination all media were clear and the fundi were normal. No cause could be found for the nystagmus. The left eye showed a convergence of 30 degrees, which did not lessen under pupillary dilatation. Refraction showed: ODV. ? 5.00 plus 6.00 x 90— ?; OSV. ? 2.00 plus 1.00 x 90— ? On July 1, 1918, under ether anesthesia, a guarded tenotomy of the internal rectus of the right eye, and a Reese resection

of the external rectus, were performed. The sutures were allowed to remain in 5 days.

Case No. 11.—B. S., age 9, had had weak, dancing eyes and convergent squint in the right eye, since infancy. All media were clear and the fundi were normal. No visible cause was found for the rotary nystagmus. The right eye converged 20 degrees. Refraction showed: ODV. 20/100 H. 20/100 plus 1.50 x 90=20/100; OSV. 20/70 H. 20/70 plus 1.50 plus 1.00 x 90=20/70. Although the vision is about equal in the two eyes, it cannot be improved with lenses, and no pathology has been found in the fundi. On July 1, 1918, under ether anesthesia, a guarded tenotomy of the internal rectus and a Reese resection of the external rectus, of the right eye were performed, and also a guarded tenotomy of the internal rectus of the left eye. The sutures remained in position 5 days.

Case No. 12.—M. S., age 13, had had weak, dancing eyes and a right squint since infancy. She had worn glasses for several years without improvement in her vision, or in the dancing and the squint. At this time she had a marked, central, rotary nystagmus in both eyes and in extreme fields. The right eye converged 20 degrees. Refraction showed: ODV. 20/100 H. 20/100 plus 1.00 x 90=20/100; OSV. 20/50 H. 20/50 plus 1.00 x 90=20/50. This child had not undergone an operation or worn glasses.

Case No. 13.—L. C., age 19, had had a manifest convergent squint of the right eye since 5 years of age, but had undergone no operation. She had worn glasses for 10 years without improvement, beginning the use of lenses at the age of 9, four years after the appearance of the squint and two years after the usual age at which the fusion-sense is developed. Refraction showed: ODV. 20/70 H. 20/200 plus 1.75 plus 1.00 x 45=20/30; OSV. 20/50 H. 20/200 plus 2.00 plus .25 x 75=20/20. The right eye showed a convergence of 30 degrees, which did not lessen under cycloplegia. All media were clear and the fundi were normal. On July 29, 1916, under cocaine anesthesia, a guarded tenotomy of the internal rectus and a Reese resection of the external rectus, of the right eye, were performed, and also a guarded tenotomy of the internal rectus of the left eye.

Case No. 14.—E. M., age 14, had had a manifest convergent squint of the left eye since the age of 8. He had never worn glasses, or had an operation. Refraction showed: ODV. 20/50 H. 8/200 plus 3.50 plus 75 x 50=20/20; OSV. 1/200 H. 1/200 plus 2.50 plus 2.50 x 165=20/200. The left eye converged 20 degrees. The vision was subnormal in both eyes, but there was very much less vision in the left eye, on account of the high degree of nystagmus. The left eye would register a blurred image and the right a clearer image, hence, for the clearest binocular vision, the image through the left eye would have to be suppressed, which resulted in the squint. His parents stated that his eyes were straight until he was 8 years old, but this is probably an inaccurate statement. On July 31, 1916, under cocaine anesthesia, a guarded tenotomy of the internal rectus of the right eye was performed, and also a guarded tenotomy of the internal rectus and a Reese resection of the external rectus, of the left eye. The sutures remained in position one week.

Case No. 15.—I. I., age 15, had never worn glasses or undergone an operation for the correction of convergent squint of the left eye, which had existed since he was 3 years of age. On July 25, 1916, a guarded tenotomy of the internal rectus and a tendon tucking operation, Todd method, of the external rectus, of the left eye, were performed. No tenotomy was done on the external rectus of the right eye. Therefore, 10 degrees of uncorrected convergence remained after operation, emphasizing the fact that to obtain perfect cosmetic results, both eyes must be operated upon.

Case No. 16.—M. L. age 15, had had a manifest convergent squint of the right eye since the age of 3. He had worn lenses for 6 years without improvement in the squint or vision of the right eye, which showed 35 degrees of convergence, and which did not lessen under dilatation. All media were clear and the fundi were normal. Refraction showed: ODV. 2/200 H. 2/200 plus 7.00=no improvement; OSV. 20/100 H. 20/200 plus 7.00=20/20. These eyes were hyperopic to a very high degree, but the vision in the squinting right eye had gradually diminished to 2/200, or practical blindness, and the correct lens would not improve its vision. This shows the futility of waiting for time and advancing years to improve the vision and straighten the eye. On August 21, 1916, a guarded tenotomy of the internal rectus and a Reese resection of the external rectus, of the right eye, were performed, and a guarded tenotomy of the internal rectus of the left eye. The sutures remained for 7 days.

Case No. 17.—M. L. age 18, had shown a manifest, convergent squint that did not develop in the left eye until the age of 14. The patient's statement is probably incorrect as to the age at which he became cross-eyed. He had never worn glasses, or had an operation. Refraction showed: ODV. 20/20 H. 20/50 plus .75 plus .25 x 90—20/20; OSV. Hm. one foot plus 2.00 x 180=no improvement. There is a marked difference in the visual acuity, the right eye being normal and the left eye practically blind. Therefore, the left eye never did and never could produce as clear an image as the right eye, even at an early age; hence, for these eyes to have clear binocular vision, the image coming through the left eye would have to be suppressed, and this is what the patient learned to do before the age of 7, which accounts for the convergence of the subnormal left eye. The left eye was practically blind at the age of 18, even though the refractive error was small and no pathology was found in the left fundus. This emphasizes the fact that squinting eyes will become amblyopic because they turn away from the normal visual axis. On August 25, 1916, a guarded tenotomy of the internal rectus and a tucking, Clarke method, of the external rectus of the left eye, were performed. The sutures remained one week. The cosmetic result from the operation was not perfect, because nothing was done at the operation to the right internal rectus tendon. There remained about 10 degrees of uncorrected convergence.

Case No. 18.—H. C., age 3, had had a manifest convergent squint of the right eye for 3 months. It was impossible to determine this child's visual acuity by the usual tests. The pupils were dilated with atropin for 24 hours, and still the right eye did not assume parallelism. Her retinoscopy under atropin cycloplegia, was as follows: OD. plus 1.50 S. with plus 1.00 Cx Ax. 105; OS. plus 1.50 S. This correction, with a plus .50 S. deduction, was prescribed for constant use, and she wears it without complaint. On November 15, 1920, under ether anesthesia, a Reese resection of the external rectus and a guarded tenotomy of the internal rectus, of the right eye, were performed, and also a guarded tenotomy of the internal rectus of the left eye. The patient left the table with a definite over-correction, or divergence.

Case No. 19.—H. N., age 5, showed a manifest convergent squint of the left eye at the age of 2, which condition has since gradually grown worse. She has a maternal aunt who has a convergent squint of the left eye. This child was too young to determine the visual acuity with the usual tests, and so her pupils were dilated with atropin for 24 hours.

Her retinoscopy under atropin dilatation was as follows: OD. plus 2.50 S.; OS. plus 3.50 S. One diopter was deducted from the above refraction, and the prescription was ordered for constant use, but the patient could not be persuaded to wear her glasses. On August 14, 1920, under ether anesthesia, a guarded tenotomy of the internal rectus of the right eye was perfromed, and also a guarded tenotomy of the internal rectus and a Reese resection of the external rectus, of the left eye. The left eye had remained straight without the use of correcting lenses, when I last saw the patient, August 13, 1922.

Case No. 20.—W. S., age 9, had shown a manifest, convergent squint of the left eye, since the age of 3. He had worn glasses for 2 years, but had had no operation. All media were clear and the fundi were normal. The vision was as follows: OD. 20/50; OS. finger at one foot, convergence of 35 degrees. Under atropin dilatation for 24 hours, the left eye did not straighten. His retinoscopy was as follows: OD. 10/200 with plus 4.50 S.=20/30; OS. F. one foot with plus 6.50 S. Full correction was ordered for use after operation. On June 2, 1916, under ether anesthesia, a guarded tenotomy of the internal rectus of the right eye, was performed, and a guarded tenotomy of the internal rectus and a Reese resection of external rectus, of the left eye.

Case No 21.—D. N., age 16, had shown a manifest, convergent squint in the left eye since the age of 5. She had had no operation but had worn the following correction constantly, during the last 8 years: OD. plus 3.00 S.; OS. plus 4.00 S., had not improved the squint. Her vision with pupils undilated, was: OD. 20/70; OS. 20/100, and under atropin cycloplegia for 24 hours was: OD. 10/200 with plus 4.75 S.=20/40; OS. 6/200 with plus 5.00 S. =20/50. There was no marked disparity in the vision of the two eyes undilated, but dilated and with proper correction, the refractive error is plus .25 greater in the left than in the right eye. However, this patient stated that images looked smaller when further away, when viewed with the left eye, alone. On August 1, 1916, under ether anesthesia, a partial tenotomy of the internal rectus of the right eye was performed, and a partial tenotomy of the internal rectus and Reese resection of the external rectus of the left eye.

Case No. 22.—O. T., age 10, had shown a manifest, convergent squint of the left eye since he was 3½ years old. He had worn glasses constantly during the last 5 years, without improvement. His vision was 20/30 with the right eye and 20/40 with the left eye, with 25 degrees of convergence of the left eye. He had been wearing OD. plus 2.50 S. with plus 75 Cx Ax. 90=20/20; OS. plus 3.00 S. with plus Cx Ax. 90=20/30. This was also his retinoscopy following the 24-hour dilatation with atropin, but the left eye did not straighten under atropin. The same glasses were continued after the operation. On June 2, 1923, under ether anesthesia, a guarded tenotomy of the internal rectus of the right eye, was performed, and a guarded tenotomy of the internal rectus and Reese resection of the external rectus, of the left eye.

Case No. 23.—E. G., age 13, first noticed that the left eye turned toward the nose at the age of 3. She has worn glasses constantly since 4 years of age. Her vision was 20/30, with 35 degrees of convergence in both eyes. The squint was not reduced after 24 hours of atropin cycloplegia. Retinoscopy was as follows: ODV. 6/120 with plus 2.25 S. with plus .37 Cx Ax. 90=20/20 ? ; OSV. 6/100 with plus 2.25 S. with plus .37 Cx Ax. 90=20/20. Following the operation, the above correction, with 1 diopter deducted, was ordered for constant use. For two years previously, she had been wearing OD. plus 4.00 S.= 20/100; OS. plus 3.00 S.=20/50, which correction markedly reduced her vision. On June 1, 1922, under ether anesthesia, a guarded tenotomy of the internal rectus and a Reese resection of the external rectus, of both eyes, were performed. The sutures were allowed to remain for 7 days.

ABSTRACT OF DISCUSSION.*

Dr. R. H. T. Mann, Texarkana: Many eyes will be saved, with useful vision, when mothers and family physicians learn to send such cases as these to the oculist as soon as the squint is noticed. And when they learn that an eye which is crossed will never be a useful eye, as far as vision is concerned, if the correction is not made before ten or twelve years, then these cases will be sent to the oculist early.

The very condition which Dr. Ward is trying to correct in his paper, grew out of a misconception among the oculists themselves. Now they must work to correct that misconception. They would say, "Take this child home, and when it can read and is about 10 years old, come back, and we will see what we can do with this hypermetropia, or with the crossed-eye." But with the retinoscope and shadow test, a child's eyes can now be correctly refracted at any age. Start treatment when you make the first examination. Usually, these cases can be cured by proper glasses, if they are due to errors of refraction. Glasses should be prescribed just as soon as the error can be discovered, and that is immediately upon noticing the crossing of the eye.

Where there is some defect in the fundus, and no hope of ever increasing the vision and saving two useful eyes, the time at which one wishes to correct this squint may be selected, because one can never hope to overcome the visual defect. In an eye with central choroiditis, in which there will never be any useful vision, one can select the time for the operation, but certainly not in eyes which become crossed due to hypermetropic conditions. These eyes should be examined and glasses prescribed, not at a year and a half, or three years, but as soon as the squint is noticed.

Dr. John O. McReynolds, Dallas: I am glad to acknowledge the difficulties Dr. Boerner has encountered with this very complex class of cases. We need to consider it from two points of view: that of the ophthalmologist or general practitioner, and that of the general public. The fact that there are so many divergent views with reference to the method of procedure must certainly mean that there have been good results obtained by all of these various methods, and at the same time bad results by all of these methods. The greatest impetus to this subject was given by the work of Stephens and others, thirty years ago. In 1894, Dr. Hirschberg stated that the first question he asked of an American patient was how many times he had been "Stephenized."

The American Medical Association through its ophthalmic section has devoted a great deal of time to this subject. The important facts are that these patients should be looked after early in life, and that they present complicated problems that may require a good deal of time to solve. When it is recognized that this condition is in reality a deformity, better cooperation can be obtained, which is necessary in order to secure the very best results.

*Papers of Drs. Ward and Boerner, immediately preceding.

OPTICAL NYSTAGMUS.*

BY

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I have little to add to the sum total of our knowledge of optical nystagmus that is absolutely new, but it is my intention to make statements sufficiently radical, even though dogmatic, to elicit thought and discussion, which may redound to our credit. Many ophthalmologists refuse to accept the responsibility of such cases, because they are not profitable, economically; nor do they present dramatic possibilities of surgery. On the other hand, they require careful, painstaking effort, with special attention to details, if a successful issue is to be expected. The evasion of this issue does not reflect credit upon the medical profession, for which reason I hope the presentation of these thoughts on this sorely neglected subject will attract the attention of Texas doctors to this condition.

To present more clearly my purpose, let me restate my title as nystagmus due solely to optical errors; otherwise the discussion would be too extensive. It should be borne in mind that patients presenting optical nystagmus, have greatly reduced vision and are necessarily more or less deficient mentally. Therefore, any subjective method employed for the correction of the optical error is hazardous. In the skiascopic test, which is purely objective, no reliance is to be placed upon the subjective answers of the patient. Skiascopy is reliable, accurate and scientific, and gives hopes of correcting the distressing condition.

I have always been a firm believer in the proposition that skiascopy was the correct and only scientific method of determining refractive errors, and because of my faith in the procedure, I find myself continually reviewing series of special cases to determine its value. Thorington makes the following statement concerning the value of skiascopy:

"With an eye otherwise normal, excepting for its refractive error, and being under the influence of a reliable cycloplegic, there is no more accurate method of refraction than by skiascopy, because: First, the character and amount of the refractive error is quickly determined; second, the exact refractive error is determined objectively, without any subjective questioning of the patient; third, there is but a short time necessarily required to perform the test; fourth, there is no need for expensive apparatus to make the test; fifth, its great value can never be overestimated in case of nystagmus, young children, amblyopia, aphakia, illiterates and feeble minded."

Optical nystagmus necessitates a careful and thorough review of the case, as all cases of nystagmus, which are not purely optical, must be excluded. This means a complete history, and that all factors must be considered with an unbiased mind, in order that the several elements of the case may be properly interpreted, otherwise the skiascopic test for the correction of nystagmus might be employed in a complicated condition in which the refractive error may be only incidental, and not the causative factor. These cases should be handled at the earliest opportunity, as a sensitive macula lutea must be developed.

The examination should be made under atropia only, and that in sufficient strength to insure complete paralysis of the ciliary muscle, otherwise there can be no assurance of the accuracy of the test. All abnormalities of the eye should be noted, and careful consideration given to their influence upon the nystagmus. The failure of the development of acute vision at the macula lutea, causes the eye to continually oscillate in an effort to find a spot of acute vision. Therefore, the first step should be directed to converting the ametropia into an emmetropia, which can only be accomplished accurately and scientifically by a properly performed skiascopy. This enables the ophthalmologist to devote his efforts to measures to develop vision. Some cases respond promptly, while the vast majority require much time and thought. We must not overlook the question of co-operation, because upon this factor, success or failure may ultimately depend.

CASE REPORTS.

Case No 1.—V. E., was a fat, overgrown girl of 10, who had spent the past two years in the second grade, without promotion. The children delighted in teasing the child, because of her peculiar grimaces and dancing eyes. The taunts of the children were a source of great annoyance to the teachers and the school authorities, because the family insisted that the molesting of the child should cease, and cease at once.

The symptom complex in this case was most interesting, but a detailed review of the case is beyond the scope of this paper, therefore only those of its phases that complicated the nystagmus will be considered. The internist recommended endocrine therapy, because of the size and obesity of the child, and the results secured under the direction of the family physician were quite satisfactory. There were no labyrinthian or otitic complications. The adenoids and tonsils had been removed before I was consulted, but without any relief of the symptoms. As there were many complications in this case, considerable time was required to examine the patient, so that a definite diagnosis might be made. A two per cent solution of atropin was instilled into the eyes four times a day for ten days. The ocular examination revealed anemic fundi, with a number of widely scattered spots. The choroidal pigment was very prominent; the maculae luteae were indistinct, and therefore difficult to locate. The skiascopic examination revealed the static refraction to be: OD. plus 1.25 plus 2.75 x 90=20/50; OS. plus

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, May 9, 1923.

1.50 plus 2.50 x 90=20/50. There was no improvement with binocular vision.

The educational period was more or less stormy, as it was with great difficulty that any semblance of cooperation could be secured, which was due in a large measure to the mental state of the patient. After some six years of persistent effort, the results in this case are as follows: The mental results are only fair, as the patient is still of the morose type; the physical results are excellent; the control of the nystagmus is good, as only when the patient is excited is the nystagmus apparent to the casual observer, and the improvement in her vision is excellent, as now the binocular vision is 20/30.

Case No. 2.—K. S., was under observation for eight years. During the early weeks of life it was noted that the eyes were in constant motion, and that there was no apparent effort to fix the vision. Otherwise, the child was normal. As the parents were intelligent people, a number of oculists were consulted in Texas, as well as elsewhere, but with no definite action following the consultations. The nystagmus was ascribed to a very high degree of myopia, for the correction of which removal of the lenses was advised. The parents were opposed to any operative procedures, as they feared the end results would not be entirely satisfactory. When I first saw the patient, I immediately appreciated the fact that no operative procedures that might be suggested would be well received, although I concurred in the advice of the oculist previously consulted. Quite a little time was consumed in explaining the situation to the parents.

During this time, careful examinations were made to determine the causative factors, and all factors except the eye were eliminated. Therefore, a 2 per cent solution of atropia was ordered instilled in the eyes 4 times a day for 2 weeks. The examination revealed that the fundi were anemic; there was marginal disseminated choroiditis; and the maculae luteae were indefinite. The static correction, as determined by skiascopy, was prescribed as follows: OD. 21.00 3.00 x 1.80 20/100; OS. 22.00 3.00 x 1.80 20/100. There was no improvement with binocular vision. Careful instructions were given as to the use of the eyes, and also as to ocular exercises, and the use of the stereoscope. The educational instruction was through a private tutor. This patient has returned to the office repeatedly. At the first visit after the original examination, it was apparent that there was a decided decrease in the nystagmus. The binocular vision was 20/70. This patient has been re-examined under atropia three times without an increase in the strength of the lenses.

The patient enrolled in the public schools at the age of 10, and has proven a good student, keeping up with her classes. She returned to the office recently because of failure of acuity of vision, as it was 20/70, while at a previous examination, the 20/50 line was easily read. It was not deemed expedient to take her out of school to re-examine her eyes, as I thought that the failure of vision was transitory. She will return after the close of school for a careful re-examination. One should anticipate that in such degrees of myopia posterior staphylomata would develop. Unless some grave complications of her myopia occur, I will be able to state that the visual results are excellent, considering the high myopia; the physical condition, excellent and that the control of the nystagmus has been good, as it requires a careful examination to detect the oscillation.

Case No. 3—E. P., was a boy 5 years of age. The history reveals that there were three maternal cousins, whose first-born presented nystagmus. The oculists consulted, advised that no steps be taken for the correction of the condition until the child was older. When I first saw the patient I was impressed with its nervous state, and the fact that the nystagmus was materially increased under excitement. Much time was given to the study of this case, to determine the factors responsible for the nystagmus. He was circumcised, and the tonsils and adenoids were removed, with a decided improvement in the nervousness.

A 2 per cent solution of atropia was instilled in the eyes four times a day for 10 days, when the examination revealed that there was a slight tendency to conical corneae, otherwise, the anterior segments of the eyes were normal. There were discrete spots widely scattered throughout the fundi. He was given his static refraction, as determined by skiascopy, which was as follows: OD. plus 2.25 plus 3.00 x 90=20/70; OS. plus 2.00 plus 3.00 x 90= 20/70. There was no increase in acuity with binocular vision. The cooperation in handling this case was wonderful. If for no other purpose than to show what might be accomplished through intelligent cooperation, this paper would be worth presenting. The mother procured an educator board, so that she might devote her time to the teaching of this child. His progress has been very satisfactory.

He entered school at the age of 8, with the explicit agreement that the school authorities were not to give any advanced standing because of the instructions of his mother. He was instructed to attend school only half a day, but even under this handicap, he made the first grade during the first session. The second year he was permitted to attend full time, with the result that at the end of the session he had completed the third grade. This fact is not reported as evidence of the brilliancy of this patient, but rather to show what had been accomplished by the wonderful instruction of the mother. He has continued in school without interruption, and is always exempted in all his studies. The physical condition of this patient might be reported as excellent and the nystagmus as controlled, as close attention is required to note the oscillations.

It is safe to draw the following conclusions from this fairly comprehensive series of cases of optical nystagmus:

CONCLUSIONS.

1. Cases of optical nystagmus should be treated at the earliest opportunity, as delay may seriously interfere with the successful issue. Skiascopy is an objective and not a subjective method of refraction, and therefore the cooperation of the patient is of no consequence.

2. Optical nystagmus should be of especial interest to ophthalmologists, because its correction is based upon scientific facts. Skiascopy can only be performed by legally qualified practitioners of medicine, because a reliable cycloplegic is the basic element in the procedure, and the employment of medicinal agents by optical fakers is prohibited by the laws of Texas.

3. A review of the histories of these cases is an interesting study in sociology, as many of them are received late and show clearly the demoralizing effects of insufficient educational advantages.

4. The economic loss to the state cannot be estimated, because who is the prophet who can tell the inherent possibilities of a child

afflicted with optical nystagmus? The correction of this condition improves the efficiency of our schools, because the class-room that is impeded by one or more of these unfortunates, cannot make satisfactory progress.

5. Cases of optical nystagmus reveal promptly the efficiency of responsive cooperation and the futility of disinterested attention. The successful issue of the case is well worth the effort.

6. Skiascopy is the proper and scientific method of handling these cases.

7. Who will answer the cry of distress, "Come over into Macedonia and help us"?

ABSTRACT OF DISCUSSION.

Dr. John H. Burleson, San Antonio: Scientific refraction is the drudgery of ophthalmology, and it is also the least remunerative branch. Good refractionists, like good musicians, are born, not made. To be a good refractionist, one must have both imagination and infinite patience. After an experience of 25 years, I find that it is impossible for me to refract correctly, without first getting a complete history of my case. Then I try to impress my patient with the fact that I am going to prescribe glasses from what I see, not from what they see.

Optical nystagmus is, to my mind, the most difficult refraction, because coupled with a greatly reduced vision, there is usually a low mentality. I certainly agree with the essayist when he says that a scientific refraction can only be done in the young and illiterate, under complete paralysis of the muscles of accommodation. All must admit that the shadow test is the only scientific refraction.

Dr. E. L. Howard, Fort Worth: Too much stress cannot be laid upon skiascopy. Too few physicians realize the importance of it; at any rate, they are not using it as they should. In my opinion, it is practically impossible to do scientific refraction without skiascopy, especially in children and mental defectives.

Dr. E. H. Vaughn, Tyler: I had a patient about 16 years old, year before last, who had fallen down in her grades. I did everything I could for her, but she finally dropped out of school, and was very despondent. I wish Dr. Moore or somebody who could have done her some good could have had her case. One time, I was in Chicago as house surgeon of a hospital, to which a patient came from Texas, who had a bad case of nystagmus, that Dr. Burleson had refracted. We kept her there a week, but were unable to improve on Dr. Burleson's work. However, it was certainly a very instructive case for all the students. The use of the retinoscope is very important. Some specialists are getting too lazy and are leaving refraction to their assistants.

Dr. J. O. McReynolds, Dallas: For thirty years, I have been utilizing what information I could gain through skiascopy. I do not feel, however, that it is necessary to confine one's self to this one method of objective examination. I think it would be well to make a complete examination with a retinoscope, confirm that with the ophthalmoscope and check up with the ophthalmometer. In other words, it would be proper to bring into requisition every form of objective examination, and when we have done all these things it is still not wise in many cases to prescribe lenses purely upon the result of objective examinations; subjective tests should be added, if possible. There are many cases in young children who do not know their letters. I sometimes take these patients and go over their objective examinations, and perhaps prescribe provisional glasses, then instruct their parents to teach them their letters by means of blocks, and after a couple of weeks, perhaps, I am able to determine exactly how much vision they have acquired. This enables me to make a record of the amount of vision which such a child possesses; then, after a lapse of a few weeks or months, results can be checked again to see how much actual development has taken place as a result of the therapeutic use of glasses. I have found patients, for instance, who at first would be barely able to count fingers, but who upon proper use of the vision which they had, were finally able to read.

I feel that, as ophthalmologists, the most important thing we could do at this time would be to convince not ourselves, because we are already convinced, but the general profession and public. All of these cases of ametropia should be attended to just as early as possible. No possible advantage can arise from delay. While I do not feel that the exact limits of development of the fusion faculty have been determined, I do feel that it is certainly more susceptible of cultivation in the early years of life, and it would be distinctly advantageous to our patients to get the maximum vision at the earliest possible time.

Dr. Moore (closing): The strength of atropia that I usually use is from one-half to one per cent, but in obstinate cases of nystagmus, in which the patients are so mentally deficient that they are not capable of responding intelligently when questioned on ordinary topics, I find it advantageous to use a 2 per cent solution of atropia, as I wish as complete cycloplegia as possible. In a number of these cases, where the mental phase of the case is not so defective, I use a one-half of one per cent solution. Speaking of distressing results from the use of atropia, I recall a baby 9 months old with strabismus, in which I ordered a one-half of 1 per cent solution to be used in the eyes. The next morning he had developed a rash resembling scarlet fever, due to the fact that instructions to completely close the nasal duct had not been followed. This baby secured the systemic effect of the atropia. Fortunately, I have never had in my experience a case of glaucoma to follow the use of atropia. Dr. Lewis Callan of New York said, "If glaucoma follows the use of atropia, it is because of a pre-existing glaucoma we failed to recognize." It sometimes takes a little ingenuity to properly retinoscope these patients, as well as considerable time. I have found it advantageous to place a good, snug bandage over alternate eyes as the skiascopy progresses. Lack of attention to refraction by ophthalmologists has given the opening for the optometrists, and they grow in numbers, reputation and financial reward, just in the proportion that we neglect this field.

I agree with Dr. McReynolds that the psychologic factor in the successful fitting of glasses depends upon the impression the patient takes away, and that this may be increased by a subjective test of lenses. When we become so narrow-minded that we consider only one course as proper, we often miss the whole story. The subjective method of refraction cannot be cast aside as mere chaff, because it has an important position in the refractionist's armamentarium.

Diphtheria Antitoxin, Refined and Concentrated.—A refined and concentrated diphtheria antitoxin (see New and Nonofficial Remedies, 1923, p. 283) prepared according to a modification of Banzhaf's method, marketed in syringes containing 1,000, 3,000, 5,000, 10,000 and 20,000 units, respectively. United States Standard Products Co., Woodworth, Wis.

CASE OF CONGENITAL, UNILATERAL AND INTERMITTENT EXOPHTHALMUS AND ENOPHTHALMUS.*

BY

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Intermittent, non-pulsating exophthalmus is sufficiently rare to justify one in reporting a new case to the profession. Before submitting this report, I am taking the liberty of giving a resume of the literature on this subject, amplified by a few deductions from my own observations.

The anatomic basis of this phenomenon deserves primary consideration. The ophthalmic vein empties posterially into the cavernous sinus, and anteriorly forms an important anastomosis with the angular vein which becomes the facial vein. Sometimes, according to Gray, the veins from the floor of the orbit collect into a separate trunk, the inferior ophthalmic vein, which either passes out of the orbit through the spheno-maxillary fissure to join the pterygoid plexus, or else, passing backward through the sphenoidal fissure, enters the cavernous sinus, either by a separate opening or in common with the opthalmic vein. The structure of the ophthalmic veins favors the formation of varices, for they are without valves, are situated in loose fatty areolar tissue which affords little support, and have several bands and constrictions, particularly at the inner angle of the sphenoidal fissure, and at the points of connection with the cavernous sinus. The above is the normal anatomical picture.

The essential pathology in intermittent, non-pulsating exophthalmus, is a varicose condition of the orbital veins, which are engorged or not, according to the position of the patient. There are no post-mortem findings to verify this conclusion, as only one necropsy (Lindenmeyer[1]) has been reported, and that was unsatisfactory.

Aside from the natural anatomical predisposition to varicosities in the orbit, there may enter as etiological factors certain atypical anatomic features, with or without pathological conditions of the vein walls or other orbital structures. Any congenital or acquired obstruction to the return flow of the local venous blood, would tend to produce the condition under discussion. Narrowing of the sphenoidal fissure, presence of a tumor, a change in the size and arrangement of the orbital contents, a relative increase in the size of the orbital cavity, a weakness of the vein wall which might be congenital or the result of disease—one or more of these causes may be present.

Ulbrich[2] and Zeeman[3] believed the congenital weakness of the vein wall a very important causative factor. Trauma is always considered secondary and not of particular consequence. Birch-Hirschfeld[4] considers an abnormal constriction of the anterior facial vein, which receives by anastomosis with the ophthalmic vein a good part of the orbital drainage, as quite important. Staehlberg[5] mentions atrophy of the orbital fat, with consequent lack of support. Chevallereau[6] considers an abnormally small eyeball as predisposing, on account of a tendency to slip through the palpebral fissure. Others claim

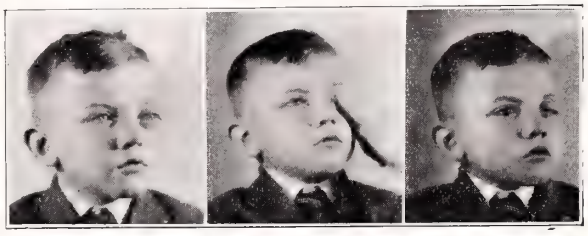

FIG. 1.—Shows exophthalmus in left eye with child erect.
FIG. 2.—Finger depressing eyeball back into orbital socket.
FIG. 3.—Shows left eye depressed farther back than normal.

a relaxation of the orbital fascia is necessary. Vieussen[7] reports a case in which there was a congenital connection between the arachnoid space and Tenon's capsule. In those cases in which the inferior ophthalmic vein empties into the pterygoid plexus, a stasis in this plexus will have its influence.

Only when the varix is located behind the eye will exophthalmus occur. If above or on either side of the eyeball, the varicosities will present, when engorged, but cause no protrusion of the ball.

DIAGNOSIS.

The diagnosis is easy. An exophthalmus which is non-pulsating and occurs only when a change of position favors engorgement of the orbital veins, disappearing as quickly when the position favors drainage, can hardly be classified as any other type. Posey[8] differentiates orbital hemorrhage by the discoloration of the lids, by the constancy of the protrusion, and by the rather rapid disappearance due to absorption of the blood. He differentiates cavernoma by its more or less permanency and the small influence of pressure in reducing the exophthalmus. For-

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, Texas, May 10, 1923.

1. Lindenmeyer, O.: Klin, Monatsbe f. Augenblk., Vol. 68, p. 199, Stuttgart, Feb. 25, 1922.
2. Ulbrich: cf. Arch. Augenblk., Vol. 65, 1910.
3. Zuman: cf. Kl. Mtsble. Augenblk., Vols. 60 and 62, 1919.
4. Birch-Hirschfeld: cf. Graefe Saemisch, Vol. 9, 1907.
5. Staehlberg: cf. Hygiea, p. 886, 1908.
6. Chevallereau: cf. Recneil d'ophth., p. 113, 1908.
7. Posey, W. C.: Jour. A. M. A., Vol 44, p. 538, Feb. 18, 1905.
8. Posey, W. C: Jour. A. M. A., Vol. 44, p. 538, Feb. 18, 1905.

ward bending of the head, bowing or twisting the neck, pressure on the internal jugular vein of the affected side, coughing, crying, holding the breath, etc., are all causative, and one or more will readily produce the exophthalmus.

The condition is rather rare. In 1907, Birch-Hirschfeld[9] collected from the literature up to 1906, 56 cases. In 1905, Posey[10] summarized 39 formerly reported and added one of his own. In 1922, Wissemann and Schulz[11] collected 25 cases reported between 1907 and 1921, but four were pulsating and 3 showed persistent exophthalmus. They add one case from their records. The first case was described by Schmidt[12], in 1805, in a child 16 days old. In addition to the above, two cases reported in 1922, are submitted. Heeb and Van de Erve[13], report the case of a girl, 17 years of age, in which the x-ray showed absence of the superior and temporal walls of the left orbit, thereby directly connecting the orbital and cranial cavities. The exophthalmus was due to pressure from the brain, and there must have been some pulsation. O. Lindenmeyer[14] adds a typical case with no unusual features.

Posey[15] states the condition occurs with equal frequency on the two sides. Lindenmeyer[16] investigated 13 cases, 11 of which occurred on the left side, and suggests the possibility that the relative smallness of the left internal jugular vein may have an influence, stating that Krauss and others had found this to be true in some cases. Of the 27 cases in which the side of occurrence was mentioned, I found 15 on the left side and 12 on the right. The recorded figures, representing the amount of exophthalmus, vary from 10 mm. to 30 mm., the last being given by Denhaene.[17] Actual complete dislocation forward of the ball between the lids, is reported only once, by Lacompte.

In several of the case reports, the presence of enophthalmus is mentioned, when the patient is at rest, with or without additional pressure. Augstein[18] mentions the enophthalmus with patient recumbent, and with Staehlberg[19], and Inouye[20], and Augustin[21], report slight enophthalmus even when the patient is in the erect position, with no straining. In Posey's[22] case, slight pressure was necessary to produce the enophthalmus.

PROGNOSIS AND TREATMENT.

Prognosis is fairly good. Often the vision is well preserved, and no bilateral case has ever been reported. Optic atrophy, with or without pressure due to hemorrhage, may occur. There may be spontaneous recovery, due to thrombosis.

The treatment is not satisfactory. Removal of part of the varicosities may be attempted. A pressure bandage gives temporary relief, and is necessary in the extreme cases. Where the eyeball is small and the palpebral fissure relatively large, an external canthoplasty may be performed, to narrow the fissure, or an orbicularis advancement may be made.

CASE REPORT.

M. H., aged 7, gives history of intermittent prominence of the left eye since birth. Coughing, crying, bending forward, etc., cause marked protrusion of this eye. No pulsation is present, and no pain unless the eyeball is extremely proptosed. For several years the ball has frequently been completely dislocated forward, between the lids, when the child cried vigorously or had a severe coughing spell. During this time the mother has kept the eye bandaged constantly at night, and often during the day, to prevent the ball from "dropping out," as she expressed it. During the last two years there has been some improvement, a complete dislocation not having occurred during this time. The complete forward dislocation between the lids, has been repeatedly observed by both Drs. McReynolds and Seay. When in the upright position the eye remained fairly prominent, but when lying down the ball receded to its normal position.

Examination reveals a well nourished, male child, whose physical condition is negative, aside from a moderate proptosis of the left eye ball, with an intermittent, moderate, internal convergence and reduction of external deviation to slightly beyond the mid-line. In the erect position there is a moderate protrusion of the left eye ball, which becomes much more decided when straining, bending forward, twisting the neck to the left, or when pressure on the left internal jugular vein is exerted. Twenty-four mm. of exophthalmus can be produced. No varicosities are visible. Fundus examination shows a small

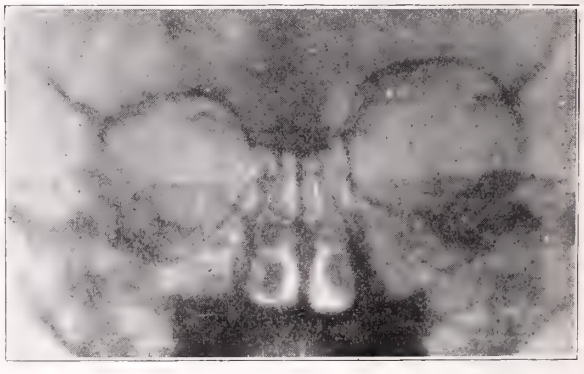

FIG. 4.—Shows difference in size of two orbital cavities.

9. Birch-Hirschfeld: cf. Graefe Saemisch, Vol. 9, 1907.
10. Posey, W. C.: Jour. A. M. A., Vol. 44, p. 538, Feb. 18, 1905.
11. Wissemann, R., and Schulz, A.: Arch. f. Augenblk., Vol. 91, pp. 11-33, 1922.
12. Schmidt: cf. Ophthalm. Biblio; Himly and Schmidt. Vol. 3
13. Heeb, H. J., and Van de Erve, W.: Am. J. Ophth., Vol. 5, p. 548, July, 1922.
14. Lindenmeyer, O.: Klin. Mtsble. f. Augenblk., Vol. 68, p 199, Stuttgart, Feb. 25, 1922.
15. Posey W. C.: Jour. A. M. A., Vol. 44, p. 538, Feb. 18, 1905.
16. Lindenmeyer, O.: Klin. Mtsble. f. Augenblk,, Vol. 68, p. 199, Stuttgart, Feb. 25, 1922.
17. Denhaene: cf. Soc. Belze d'Ophth., 1912.
18. Augstein: cf. Kl. Mtsble. Augenblk., Vol. 59, No. 2, 1917.
19. Staehlberg: cf. Hygeia, p. 886, 1908.
20. Inouye: cf. Kl. Mtsble. Augenblk., Vol. 50, No. 1, 1912.
21. Augustin: cf. Diss. Jena, 1915.
22. Posey, W. C.: Jour. A. M. A., Vol. 44, p. 538, Feb. 18, 1905.

disc, such as one finds in a high degree of hypermetropia, with some venous congestion, which becomes more marked as the proptosis increases. The fundus is otherwise normal. When in the recumbent posture the ball recedes quickly to the normal position, and by exerting slight pressure can be pushed back fully 10 mm. farther than is possible with the right eye. No pulsation is felt, and no bruit heard on auscultation, in the adjacent region. The refraction, under a cycloplegic, by retinoscopic and trial case examination, shows in the left eye five diopters of hypermetropia, with one and one-half diopters of astigmatism. The vision of this eye, with the correcting lens, is 1/10. The right eye shows one and one-half diopters of hypermetropia and one and one-half diopters of astigmatism, the correcting lens furnishing a visual acuity of 8/10. The tension in both eyes is normal. The skiagraphic plates show a very interesting condition, as the accompanying cuts demonstrate. The anterior opening of the left orbit is about one and one-half times the size of the right, and the depth about one-third greater than that of the right. The orbital walls seem complete.

SPECIAL FEATURES OF THIS CASE.

1. The extreme degree of exopthalmus present, with the unquestioned history of frequent complete forward dislocation between the lids.

2. The marked inequalities of the two orbital cavities, making possible the striking amount of enophthalmus which can be produced by pressure. The smallness of the eye ball, as shown by the high degree of hyperopia, taken in connection with the large orbit, makes an ideal situation for the development of varicosities, on account of the probable resultant lack of support for the venous walls. Also, the largeness of the orbit makes one think that the varicosities developed rather early in utero, for we know the bony cavity adjusts itself fairly well to the orbital content, and the actual content of the left orbit in this case is small when the veins are not engorged. This is shown by the decided enophthalmus possible. The cause of the development of these varicosities in utero is interesting to consider, but too indefinite to justify any worthwhile conclusions.

CONVALESCENT SERUM IN THE TREATMENT OF ERYSIPELAS.

Eighteen patients have been treated by Harmon P. B. Jordan and Cecil C. Dustin, Providence, R. I., (*Journal A. M. A.*, March 15, 1924). Of these, three died, two showed questionable improvement, and thirteen showed very decided improvement. Only cases in which a marked improvement was shown in the temperature chart and in the clinical aspect have been counted as successful. The three patients who died were moribund on admission to the hospital. Convalescent erysipelas serum is simply the sterile serum obtained from the whole blood of patients convalescing from uncomplicated erysipelas. The serum may be kept for months in sterile ampules, at icebox temperature, without losing its potency.

INTRACAPSULAR CATARACT EXTRACTION: REPORT OF 75 CONSECUTIVE CASES.*

BY

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The subject of intracapsular cataract extraction has been before the ophthalmological world for several years, and it is not my purpose to enter into any controversy, or advance any opinion as to the relative merits of the advocated procedure over the older and better known methods. This paper is simply a statement of what has been done, a description of the technique used, and a record of the results obtained. The data was secured from hospital and office records. The operations were done by Drs. J. H. Burleson, and T. J. Walthall, and myself, the largest number having been done by Dr. Burleson. I am deeply indebted to the two gentlemen mentioned for their courtesy in permitting me to report their cases, and for their assistance in the preparation of this paper. The work was done in various hospitals in San Antonio, and covers a period of three years, from January 1, 1920, to January 1, 1923.

The oldest patient operated upon was 85 years of age, and the youngest 29. The average was 61 years. There were 37 males and 38 females, of whom 37 were white, 28 were Mexicans, and 10 negroes. With regard to the stage of development of the cataracts, 50 were mature, 15 immature, 6 hypermature and 4 traumatic. There were two cases of diabetes and one case with a combination of diabetes and palsy. There were 3 cases of old choroiditis. There were 5 cases of delayed union. There was one case of keratitis following operation. In one case the pupil was occluded with an organized exudate, following operation, which later proved to be luetic. Vitreous was lost in 18 cases, varying from one or two drops to a cubic centimetre. There was not one case of iritis following operation, in any of the 75 cases reported, and no infections. Three cases gave histories of previous glaucoma, but glaucoma did not follow operation in any case.

Rupture of the capsule did not occur, nor was there failure to deliver the lens. Detachment of the retina did not occur in any case, nor has secondary cataract developed in any of the cases so far.

The visual results obtained are as follows: 20/15 in 5, 20/20 in 25, 20/30 in 19, 20/40 in 7, 20/50 in one, 20/60 in 6, 20/100 in 3, 20/200 in 3, light perception in 5, and no

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, May 10, 1923.

vision in one. In the five cases of light perception, failure was due to the following causes: optic atrophy, keratitis, delayed union, occlusion of the pupil by luetic exudate, and old glaucoma. The "no vision" was due to a previous glaucoma, and although the patient had light perception and projection previous to the operation, little hope was held out as to the ultimate result. In the eighteen cases where vitreous was lost during the operation, the visual results were as follows: 20/20 in 9, 20/30 in 3, 20/40 in 2, 20/60 in 2, and 20/100 in 2.

The following technique was used, and differs very materially from the technique advised by Lieutenant-Colonel Henry Smith and demonstrated by him before this section at Dallas, in 1921.

The condition of the patient's lids and lachrymal apparatus, and his light projection and perception are tested at the first examination. The patient is encouraged to come into the hospital the afternoon before the operation, in order to familiarize himself with his surroundings. A bath and a shampoo are given, and he is put to bed. An early morning hour is chosen for the operation. When the patient is brought into the operating room, the skin of the face and eyelids is cleansed with soap and water, particular attention being given the roots of the lashes. This is followed by sponging with ether. A solution of 10 per cent cocaine is instilled, a few drops at a time, every 3 or 4 minutes for 15 minutes, then about 10 minims of a 2 per cent solution of cocaine is injected beneath the conjunctiva, below the lower margin of the cornea, and gentle massage resorted to, to hasten absorption. The eye is then thoroughly flushed with a saturated solution of boric acid, while the lids are held open by an assistant. In from 5 to 8 minutes from the time the cocaine was injected the patient is ready for operation. All of the principles of aseptic surgery are employed, as a matter of course.

No speculum, lid hook, or other mechanical contrivance, is used to hold the lids open. The upper and lower lids are firmly grasped by the thumbs of an assistant, the upper thumb controlling at the same time the orbicularis oris. The assistant should steady his hands by resting them upon the brow and cheek of the patient, using as much traction as is necessary to completely control the lids at all times.

The operator chooses the position in which experience has taught him that he can do his best work. With a narrow rat-tooth forcep the conjunctiva and sclera are grasped firmly at the lower corneoscleral margin, getting a wide, firm bite into the tissues. The incision is made with a Smith's modification of Wilson's cataract knife, which has an extremely fine point. The point of the knife enters the cornea almost perpendicularly to its surface, one or two millimeters above the equator of the cornea, and as soon as the point of the knife appears within the anterior chamber its handle is depressed and the blade made to cross the anterior chamber quickly, making the counter puncture at the corneoscleral margin, exactly opposite the point of entrance. With one or two strokes, the knife is made to cut its way out *well within the cornea,* by an upward and outward turn of the cutting edge, being extremely careful not to allow any pressure on the globe of the eye with the fixation forceps, during the time the incision is being made. The eye being controlled entirely by the operator, it is not necessary to direct the patient how to look. The fixation forceps are now released, and the iridectomy done in the usual way.

With a lens scoop and a Daviel's spoon, one held in either hand, the operator makes gentle but constant pressure with the lower instrument at the corneoscleral margin below, with the patient looking directly forward, that is, toward the ceiling. This pressure is at first exerted in a backward, and later in an upward and backward direction, at the same time gentle pressure is exerted in a backward direction, with the upper instrument, which is placed on the sclera just above the line of incision. The pressure with the upper instrument causes a slight gaping of the wound, and the combined efforts of both instruments will soon break the suspensory ligament and dislocate the upper edge of the lens forward, when it almost immediately appears at the incision. The lower instrument is made to follow the lens as it emerges through the corneal wound, and the pressure is never allowed to relax for a moment until it is delivered outside the eye, when all pressure is removed. If the iris needs replacement, the same instrument is used for that purpose, but other than this, no manipulation of the eye is permissible. If any vitreous has escaped, it is clipped off with a sharp scissors and the lids carefully closed. The pressure and manipulation has at all times been very gentle, and no undue pressure is brought to bear upon the operated eye at any time.

The closed lids of both eyes are now covered with sterile vaseline, and a double eye pad, made of many thicknesses of gauze, with smaller pads to fill in the space below the brow, is applied to both eyes. This is

held firmly in place, first with a two-inch strip of adhesive plaster across the forehead, so arranged as to extend about one inch over the edge of the gauze dressing as it covers both eyes, the remaining width adhering to the skin of the forehead above the dressing. Narrower strips of adhesive are next applied diagonally down from forehead to cheek, across each eye. The patient is then cautioned not to attempt to lift himself, or exert himself in any way. He is carefully lifted to a wheel table, carried to his bed, lifted into bed gently and told to lie perfectly quiet on his back for five or six hours, after which he may be turned by the nurse to the side opposite the eye operated upon. The next morning the eye not operated upon is exposed by cutting the bandage away, and more adhesive strips are applied, if necessary, to prevent exposure of the other eye. If the patient has had a good night, with no pain, the injured eye is not disturbed, and if nothing calls for interference, the bandage is not removed for nine or ten days. After the first 24 hours, the patient is allowed more liberty in his movement, and is permitted to turn himself in bed at will.

No.	Date.	Age.	Nature	Complications	Final Result
1	1-10-20	61	Mature		20/20
2	2-11-20	60	Mature		20/15
3	3-10-20	35	Traumatic		20/30
4	3-17-20	64	Mature	Vitreous loss large	20/100
5	3-19-20	59	Mature		20/30
6	3-25-20	60	Mature		20/40
7	4- 6-20	72	Mature		20/20 (2)
8	4-10-20	60	Mature	Small vitrous loss	20/30
9	6-23-20	55	Immature		20/15
10	7-25-20	64	Hyprmtre	Small vitreous loss	20/20
11	8- 3-20	61	Mature		20/60
12	8- 4-20	36	Traumatic		20/20
13	8- 9-20	70	Mature	Wound healed very slowly with vit. bead	20/100
14	8-30-20	66	Mature		20/60
15	9- 9-20	60	Mature	Optic Atrophy	L. P.
16	10-25-20	70	Mature		20/30
17	10-25-20	70	Mature		20/40
18	10- 1-20	49	Immature		20/20
19	10-11-20	75	Mature		20/20
20	11- 2-20	62	Mature	Small vitreous loss	20/40
21	12- 9-20	62	Mature		20/20
22	12-13-20	53	Mature		20/15
23	1- 4-21	68	Mature	Sugar inUrine Palsy	20/20
24	1-21-21	40	Immature		20/30
25	2- 7-21	61	Immature	Previous glaucoma	No Vision
26	2- 9-21	75	Hyprmtre	Med. vitreous loss	20/40
27	2-14-21	70	Mature		20/20
28	2-27-21	50	Mature	Old Choroiditis	20/50
29	3-23-21	36	Traumatic	Small vitreous loss	20/20
30	4-10-21	61	Mature		20/20 2d R See S
31	5- 4-21	67	Mature		20/30
32	5-16-21	75	Hyprmtre		20/30
33	5-24-21	76	Hyprmtre	Small vitreous loss	20/20
34	6-30-21	73	Mature	Keratitis, Striate	L. P.
35	7-13-21	62	Mature	Delayed union	20/100
36	7-15-21	51	Immature		20/20
37	8-20-21	70	Mature	Old fundus chges	20/200
38	8-21-21	54	Immature		20/15
39	8-28-21	72	Mature	Vitreous loss	20/60
40	9-16-21	60	Mature	Delayed union	L. P.
41	9-21-21	51	Immature	Small vitreous loss	20/20
42	9-22-21	81	Mature		20/30
43	10-11-21	75	Mature		20/40
44	10-15-21	49	Immature	Small vitreous loss	20/20
45	10-28-21	36	Immature		20/30
46	11-23-21	29	Traumatic		20/40
47	11-23-21	64	Mature		20/40
48	11-24-21	77	Mature	Small vitreous loss	20/20
49	12- 7-21	60	Immature		20/20
50	2- 6-22	70	Mature		20/30
51	2-15-22	63	Mature		20/30
52	2-21-22	70	Mature	Wound failed to heal. Pupil occluded by luetic exudate	L. P.
53	3-11-22	58	Mature	Small amount vitreous	20/60
54	3-27-22	53	Mature	Old glaucoma	20/200
55	3-30-22	65	Mature		20/30
56	4- 3-22	77	Mature		20/60
57	4- 6-22	42	Immature	Small vitreous loss	20/20
58	4- 8-22	77	Hyprmtre		20/15
59	4-14-22	50	Immature		20/20
60	4-17-22	60	Mature		20/30
61	4-30-22	85	Hyprmtre	Small vitreous loss	20/20
62	5-11-22	66	Mature		20/30
63	5-23-22	47	Immature	Old Glaucoma	L. P.
64	6- 3-22	58	Mature	Small amt. vitreous	20/30
65	6- 5-22	59	Mature		20/30
66	6-16-22	51	Immature		20/20
67	6-24-22	61	Mature		20/30
68	8-11-22	61	Mature	Fundus changes	20/200
69	8-17-22	48	Immature	Small vitreous loss	20/20
70	9- 1-22	65	Mature		20/30
71	10-18-22	70	Mature		20/60
72	10-26-22	68	Mature		20/20
73	12- 5-22	66	Mature	Small vitreous loss	20/20
74	12-17-22	70	Mature		20/30
75		56	Mature	Delayed union	20/200

If I should attempt to emphasize anything in this paper, it would be the fact that there was not one case of iritis, irido-cyclitis, or infection, and no after-cataract in any of the cases reported. This would seem to indicate that iritis, irido-cyclitis and infections, are caused, at least in a majority of cases, not by what was introduced into the eye, but by what was left in the eye, namely, cortical and capsular material. As for the bugbear of after-cataract, it simply does not exist where the lens is removed within its capsule.

ABSTRACT OF DISCUSSION.

Dr. J. H. Burleson, San Antonio: Intracapsular cataract extraction has, in my opinion, come to stay. I have demonstrated to my own satisfaction that it is a safe procedure, and the records of my cases will bear out this statement. I first saw this operation demonstrated by Miles Standish of Boston, and I had been doing intracapsular extractions several years before Colonel Smith made his visit to America. It is not a fad, but a deep-seated conviction with me, that this is the best way to remove a lens. The technique as outlined by Dr. Judkins, was acquired from watching other operators; some of the ideas are my own.

I believe that the use of lid retractors and eye specula are responsible for the loss of more eyes than the method of delivering the lens. Instruments applied to the lids to hold them open, if not actually painful, certainly frighten the patient and play an important part in breaking down his morale.

I was surprised to hear Colonel Smith make the statement in Dallas that intracapsular extraction was a safe procedure when using a conjunctival flap. That has not been my experience. I prefer a section beginning at the equator and coming out well below the limbus above. I believe this section will greatly lesson the tendency to loss of vitreous; and in this connection, I wish to say that I do not regard the loss of a small amount of vitreous with the same dread and consternation I once did.

The essayist said that it is not our custom to examine the eye operated upon for eight or nine days, unless there are positive indications that something is wrong. Looking at the eye just to see how

it is getting along, is meddlesome surgery. It can do no good, and may do harm.

The absence of ciliary involvement following intracapsular extraction, except in rare instances, has always been a source of astonishment to me. When the bandage is removed on the 8th or 9th day, the sclera is white; there is no congestion; the eye is clear, and the patient is ready to leave the hospital. It is not necessary to use atropin in the after-treatment.

I have never seen the necessity for undue pressure in dislocating the lens. By our method of counter pressure, there is no difficulty in removing the lens in its capsule. There are two objections that could be advanced against this operation—delayed union of the corneal section, and the high degree of astigmatism that will continue for three or four months after operation. I do not regard a probable loss of vitreous as a contraindication.

Dr. Daniel W. White, Tulsa: With cataract operations, we have been using as a routine, systemic treatment before operation. In addition to the regular systemic treatment, we have been using rheumatic phylacogen. Since using phylacogen, I do not recall one case of iritis in the four years I have used it in cataract operations. The Doctor records a case of iritis. I wonder whether the iritis was due to an internal systemic condition or to an external condition.

Dr. R. H. T. Mann, Texarkana: I do not do intracapsular cataract extraction. I went over the statistics, this morning, of the results obtained in these 75 cases, and I think that they are very good, when we take into consideration the fact that these are the first 75 cases, and that the vision in only 9 of them is less than 20/100ths. Then there are 2 cases in which the vision is 20/100ths and 7 in which there is perception of light.

If this report covered only the simple cataracts, it would not be so gratifying, but it includes complicated cases, as well (glaucoma and fundus changes). In other words, there were good results in 88 per cent, and failures, or practical failures, in 12 per cent of the cases reported.

Dr. John O. McReynolds, Dallas: It should be remembered that the "Colonel Smith operation" and "intracapsular extraction" are not synonymous terms. There are many modifications in the procedure of intracapsular extraction. On account of the tremendous volume of cataract work which Colonel Smith has done, he has so impressed himself upon this particular operation that in the public mind and in the mind of the ophthalmologists, the intracapsular extraction is associated with his name and fame. It is not an operation of recent origin; undoubtedly, it was tried by Daviel and by his successors.

It must be admitted that the operation is technically more difficult to perform than the capsule laceration method, but the results in competent hands approach very close to the ideal. The best results demand a very critical study of the nature of each lens to be extracted, and then the operative procedure should be adjusted to meet the requirements of the individual case. When successfully performed, all post-operative complications are reduced to the minimum. I much prefer a conjunctival flap, securely held in proper position by one or more sutures. This insures better and quicker union, with less astigmatism and with the minimum risk of infection. It gives the patient greater freedom of movement, and reduces his confinement in the hospital to one-half of the ordinary time. I have had no regrets on account of the employment of this special safeguard against the complications that may attend or follow this exacting operation. A feature of the utmost importance is, that a successful intracapsular extraction enables the patient to secure vision as soon as needed, and without the prolonged and anxious period of waiting for complete maturity and absolute blindness.

Dr. O. H. Judkins (closing): I will make the prediction that twenty years hence, this will be the operation of choice by American ophthalmologists.

Dr. White asked how much experience one should have before he attempts an intracapsular cataract extraction. That depends. There are many who will never attempt it. I believe that any one who can do a cataract extraction by the capsulotomy method can acquire the technique of intracapsular extraction. Dr. White also wanted to know whether we used this method in all cases. It is the operation of choice with us, but if, for any reason, it is contraindicated, we can easily fall back upon capsulotomy.

The outstanding feature of this report is the fact that there was not one case of iritis in the entire 75 cases. There are many things that can cause an iritis. In my opinion, iritis is caused in a large majority of cases by retained cortical and lens particles.

Dr. McReynolds has had so much more experience with this operation than I, that I am glad to hear him bring out the question of the conjunctival flap. I have never used it, but think I shall give it a trial.

THE GLAUCOMATOUS EYE: WHAT SHALL BE DONE FOR IT?*

BY

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Glaucoma is the most dreaded and destructive disease of the eye, and one that taxes the oculist to his utmost resources, at times, if he would save the eye. Fuchs says:

"The accurate recognition is of the greatest importance to the general practitioner, the more so, because here prompt and proper therapeutic interference can save everything, but a false diagnosis and improper treatment may destroy everything. Cases of inflammatory glaucoma are often confounded with iritis or irido-cyclitis, and are accordingly treated with atropin, which has a particularly deleterious action in glaucoma. A case of simple glaucoma which presents no external symptoms of inflammation, is not infrequently regarded as a beginning cataract, and the patient is put off in expectation of the cataract becoming ripe, so that he waits until it is too late for iridectomy."

Glaucoma is a diseased state of the eye due to increased intraocular tension, from causes not always known, which, because that part of the sclera through which the optic nerve enters the eye has less resistive power than any other point in the globe, causes a pushing back of the sclera at that point, producing a cupping of the optic nerve, recognized by the abrupt dropping of the marginal vessels to the inside of the cup. The nerve fibres, too, are flexed over the margin of the papilla, which, with the addition of the increased tension, causes them to atrophy, the result of which is a decrease in vision.

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, Texas, May 10, 1923. Author died February 27, 1924.

As to the causes of this hypertension, Weeks classifies them as (1) obstruction to the outflow of fluids from the interior of the eye; (2) intraocular hemorrhage; (3) tumors; (4) injuries; (5) sclerosis affecting the lymph spaces at the sclerocorneal junction, and (6) increase in intraocular secretions through a defective condition of the vascular system. A full subclassification of complicated glaucoma will not be considered at this time; only the simple, the acute inflammatory and the chronic forms of the disease will be discussed.

In simple glaucoma the attack generally begins slowly; the increase in tension is so gradual that no pain or inflammatory symptoms are noticed by the patient, who suffers no inconvenience other than the decrease in vision, especially for near work, and thinks that the wearing of glasses or a change of lens is all that is necessary, so waits from day to day before consulting an oculist, only to learn the seriousness of the condition.

In the acute form there is pain in the eye, radiating to the forehead, temple and face, like neuralgia of the fifth nerve. So severe is this pain that rest is impossible. Then comes an inflamed and tearing eye, with a rapid decrease in vision. Photophobia becomes so marked that any light drives the patient frantic, and medical aid is sought. The oculist finds a typical glaucomatous eye —a dilated and unresponsive pupil, shallow anterior chamber and a nonsensitive and steamy cornea. The patient is very much depressed, and possibly only able to count fingers. Ophthalmoscopic examination is impossible because of the opaque cornea. The eye is inflamed and the tension of the globe increased. It is a picture that each physician should always have before him when examining an inflamed eye in which the vision is decreased.

With repeated attacks of the simple form, a condition obtains that may be called chronic, in which each succeeding attack becomes more severe and more prolonged, and in which there gradually develops hypertension and a decrease in vision, which is characteristic of the disease. If not controlled, this condition will lead to permanent blindness.

The reduction of the hypertension is the objective in the treatment of glaucoma, and it must be accomplished either by local and internal medication, or by operative measures. In the simple or chronic forms, a miotic will control the tension in most cases if used in the beginning of the attack. As the tension in a normal eye varies from 15 to 25 m. g., in a patient who has glaucoma, and whose tension remains near 25 m. g., it is well to use a miotic once daily for an indefinite period, maybe for the rest of his life, during which time the vision may be kept near normal, and no further damage done to the eye. If the hypertension cannot be lowered and there is a continuous decrease in vision, operative interference must be resorted to. In the acute inflammatory form, where vision is almost *nil* when first seen by the oculist, a miotic may be tried for a few days. If no improvement is found in tension and vision, an operation should be done without delay.

Weeks says that 90 per cent of all patients suffering from idiopathic glaucoma, have a history of constipation. When this condition exists, laxatives will help to lower the tension, and they should be used in conjunction with the miotics and a hot pack to the inflamed eye. In simple glaucoma, a drop of 1 per cent solution of eserin or pilocarpin, instilled into the eye at the beginning of the attack and followed by a weaker solution, to be used by the patient at home, will in most cases put an end to the attack. Where the disease has existed for some time, a ¼ to ½ per cent solution of eserin should be used at home for an indefinite period, the patient being required to have the tension tested at regular intervals. This is a protective measure in cases in which the tension remains near the upper limit of 25 m. g.

In old cases of glaucoma, where there is an atrophied iris, drugs are useless. When the vision is getting worse in spite of the treatment, operative interference should be resorted to at once. The degree of vision in such cases is not materially improved by the operation, which is done in the hope that the vision will remain stationary. In the acute inflammatory form, an early operation is advisable; if the eye does not respond rapidly to the local treatment, the operation should be done before the nerve is permanently impaired. In the chronic form, the operation should be done as soon as the miotics are found to be useless.

With me, a broad iridectomy well up in the sclera, is the operation of choice. In my patients, better results have been obtained by an iridectomy, than by either a LeGrange or Elliot operation. There is less danger to the eye, from detached retina, hemorrhage or loss of vitreous; and an equally good drainage has been given by the iridectomy. As to the results, in the acute inflammatory type, the operation usually brings quick and permanent relief, both as to hypertension and restoration of vision. In the chronic type,

as I have stated, there may not be much improvement in vision, but a further decrease in vision is made less likely, the amount of vision obtained depending upon the extent of involvement of the optic nerve.

A report of three cases of acute glaucoma, which have recently come under my care, will illustrate the operative and medicinal forms of treatment from which good results were obtained.

CASE REPORTS.

Case No. 1.—Mrs. E., aged 56, gave a negative history as to general diseases and previous eye involvement. She had been suffering from a cold in the head for three or four days, when she was awakened in the night by a severe pain in the left eye, which continued the rest of the night. She came to see me the following morning, and had a typical glaucoma. The tension measured 35 m.g., the cornea was hazy, the eye badly congested and the vision 20/200. Instillations of 1 per cent eserine and 5 per cent dionin were used, and hot packs to the eye for an hour at a time, every three hours, and a strong laxative was given that night. There was no improvement in the eye on the following morning; the vision was worse, and the pain so severe that codeine had to be given every three hours. On the third day, there was only light perception, and no decrease in tension under a 2 per cent eserine solution. No improvement was found on the fourth day, so an iridectomy was done. In a few hours the pain was much relieved, and by the next morning the tension was much lower, and the patient counting fingers. In three weeks, a 20/20 vision was obtained with proper lens correction, the tension was normal and no further trouble with the eye was experienced.

Case No. 2.—Mrs. H., aged 42, had experienced some pain in the right eye at night, for a week. There was not much pain during the day, though the patient noticed that the vision was slightly blurred. She thought it due to eye-strain from doing too much fancy work. The night before I saw her, the pain was very severe in the eye, over the forehead and temple, with a marked decrease in vision. I found a typical, acute glaucoma, with a vision of 20/200, a tension of 30 m.g., cornea hazy and pupil widely dilated. She was placed on the regular treatment, in bed in a dark room. No improvement was shown the following day. The tension was a little higher and the vision had decreased to light perception. On the fourth day I advised an operation, but it was refused. The eye continued to grow worse, and on the sixth day consent was given for an operation, and a broad iridectomy was done. Immediate improvement was shown, which continued each day. In three weeks all redness of the globe had disappeared, tension was normal, vision 20/20 with proper lenses, and the patient reading Jeager 1.

Case No. 3.—Mrs. R., aged 46, gave no history of former eye-trouble. For three or four days, there was pain in the left eye, which the patient thought was due to a foreign body, followed by a cold in the eye. When I saw her, there was marked photophobia and redness of the eye, the vision was 20/100, the tension high, and there was a large immobile pupil, with a very shallow anterior chamber. The usual treatment was prescribed—eserine, dionin, hot packs and laxatives, and also caffein and aspirin, to assist in relieving the pain. The eye in this case responded rapidly to treatment, and in 24 hours all pain had ceased, the tension was decidedly less, the eye not so inflamed, and the pupil contracted. In two days the patient could read 20/200. The eye gradually came back to normal, and she was dismissed as cured in three weeks. No operation was done in this case.

These three cases showed the same acute condition in glaucoma. Two of them did not respond in the least to local treatment, and would have rapidly gone on to blindness but for operative interference; the other case responded rapidly to local treatment.

Why should two cases fail to respond to local treatment and require operations to save the eyes, and the third case respond at once to local treatment? Was it because of some physical state of the body, or was it a mechanical obstruction of the eye that prevented the medicine from effecting a cure in the first two cases?

Much responsibility rests upon the oculist in such cases, and if local treatment fails to bring relief rapidly, he should not delay operating until it is too late to save the eye.

ABSTRACT OF DISCUSSION.

Dr. J. O. McReynolds, Dallas: We should study carefully the underlying factors in each case of glaucoma. There are so many operations I can only refer to one phase of this subject. I have been impressed with the fact that we can get the best results by a relatively small opening, provided it is situated properly, rather than by an extensive one, which would be more liable to disturb the relations of the crystalline lens.

Dr. C. P. Schenck, Fort Worth: In November, 1920, I had an opportunity to see what to me was rather an unusual case, namely, glaucoma in myopia. The case was referred by a general practitioner, for the removal of cataract because of blindness of the left eye. The pupil was dilated, and the anterior chamber was found to be shallow, the lens nucleus faintly opaque, and the nerve-head not cupped, but very white. The tension was 47 mm. with the Schiotz tonometer. The diagnosis was absolute glaucoma. The right vision was 20/200, corrected to 20/30 plus, with a minus 2.25 sphere. The pupillary reactions were normal, the anterior chamber was shallow. There was a faint nuclear opacity in the lens, and no excavation of the nerve-head. The tension was 41 mm., with the Schiotz tonometer, and the field of vision was narrowed. The diagnosis was glaucoma simplex. In five days, eserine brought the tension down to 12 mm., with marked improvement of vision, and during the two years the patient was under observation, this drug kept the tension well under control. His myopia continued to increase, but with the correcting lens, his direct vision remained at 20/30, up to his last visit in November, 1922. However, at this time the field had narrowed down until it was tubular, and the patient could get around only with the greatest difficulty. He was unable to work and was admitted to the County Farm.

Dibromin.—Dibromobarbituric acid—Dibromin is an antiseptic and germicide proposed for use in solution as an irrigating fluid and wet dressings, for flushing cavities, irrigating infected wounds and for saturating gauze packings. Dibromin is claimed to be practically free from irritating or toxic properties in the concentrations required for therapeutic use. Solutions of 1:10,000 (6 grains to one gallon) or stronger are used. Dibromin is marketed in six grain capsules. Parke, Davis and Co., Detroit.

THE MEDICAL AND SURGICAL TREATMENT OF TRACHOMA.*

BY

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TULSA, OKLKAHOMA.

We are presenting this article for constructive criticism. We know from our own experience, living in the Southwest, that those present have had ample experience with this seemingly non-destructive disease, in its earliest stages and at the very often irremediable ending of its last stages. We are speaking from our personal experience, and the close follow-up of individual cases for over 15 years. One of us (Daniel W.), due to his former Government connection, has been able to record the method of treatment and results in each case. We have also adopted a follow-up system in the cases treated in our private practice.

We fully realize that the pathology of the disease is not understood. The Scientific Bureau of Research of the American Medical Association, Dr. Ludwig Hektoen, Chairman, has honored us recently, by taking all of our trachomatous data for study.

Trachoma is a symbiotic infection, and its different varieties and degrees are produced by different strains of the virus. The object of treatment is to check the development of conjunctival hypertrophy, shortening the duration of the disease, and diminishing its evil complications. Our most efficacious therapy has been the removal of the pathological palpebral conjunctiva, or tarsal cartilage, or both.

Plasma is the great physiologic agent of the body, and all products of metabolism pass through it on their way to absorption or excretion. A large number of unnamed bodies have been found in the blood. The blood platelet is sometimes called the third corpuscle of the blood. Lymphoid cells cannot be differentiated from leucocytes. Eosinophiles may originate in the blood stream. The function of the nucleated red cell is not understood. The serum and the red blood cells are biologically different in trachoma than in other eye infections, chemical bodies apparently provoking hemolysis. Some authors claim that the unnamed and undiscovered bodies may be formed by cells of the organism, and then passed into the blood. Papillary bodies are found in the conjunctiva of infants. The endothelium of the cornea goes into the sclera (Pannus). In the tunica propria are found plasma cells. Howatri considers the limbus to be a segment of the conjunctiva, which begins toward the cornea at the end of Bowman's membrane, and extends toward the fornix.

We must bear in mind the different structures of the lid, namely, from without, inward, the skin, subcutaneous tissue, orbicularis palpebrarum muscle, palpebrarum tendon, tarsal cartillage, and conjunctiva, and finally the conjunctiva of the fornix and the eyeball. The blood supply for the lid is the arcus tarsus. Lymph vessels are found in the tarsus and conjunctiva, and may go into the cornea. The subepithelial tissues are invaded in trachoma, and surrounded by newly formed lymphoid tissue. It is held by many investigators that granulation and lymphoid tissue are the result of the reaction to the trachoma virus. The more hypertrophy is found, the more cicatricial tissue will result. The trachoma granule is made up of lymphocytes in the margin lying in the epithelial layer. In the interior lymphoid cells are found largely the germ center. A few epithelial cells and phagocytes are found. There is connective tissue between the margins of the accumulation of cells. Howatri believes the granules are lymphoid tissue. The granulations of trachoma resemble in appearance only, granulations of wounds elsewhere. After conjunctival hypertrophy disappears, cicatricial tissue results by part of the cells disappearing by resorption, part emptying themselves externally, while part grow into connective tissue.

Pannus is a layer of newly formed tissue cells greatly resembling the infiltrated, trachomatous conjunctiva. Many causes have been given. Toxins in the deep-seated submucous tissue are no doubt a factor. By mechanical contiguity, the spread of the infection to a rough surface of the cornea is brought about by constant irritation from the lids. The limbus obstructs any inflammation, and accumulation of cells results; then, when obstruction has been overcome, pannus occurs. Pannus is found between the epithelium and the basement membrane, and will clear up by resorption, and new epithelial forms. If the pannus lasts a long time and the basement membrane is involved, the deeper layers are infiltrated with many cells, the cornea is destroyed beyond repair, and sclerosis develops. This new tissue is white or yellow, and replaces the superficial layer of the cornea.

Pannus primarily infiltrates the upper part of the limbus and spreads downward, because of the circulation of the limbus. Peripheral pits in the cornea are due to the contraction of the tissue after the absorption

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, Texas, May 10, 1924.

of the follicles of the pannus. Strong astringent drugs devitalize the cornea, and form connective tissue, often leaving deep, irremediable nebulae. The tarsus is thickened by lymphoid infiltration; then it shrinks, the glands disappear, tough connective tissue results and, finally, fatty tissue. The cicatricial tissue of the conjunctiva is very seldom attached to the tarsus.

Chronic inflammation of the meibomian glands is secondary to trachoma. The connective tissue formation squeezes out the secretion and infection in the glands. Granulation tissue is more localized around the lachrymal ducts; thus when the mouth of the ducts are cicatrized the trachoma improves. The caruncle is attacked in trachoma, as Leber bodies are found there. The relapses of trachoma are due in many cases to the different stages of the disease in each lid, and also to the quiescent trachoma in the caruncle, tear-ducts and glands of the lids, and the old dormant connective tissue, the remains of pannus in the cornea.

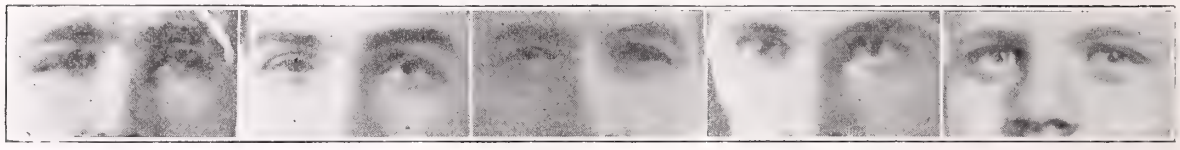

FIG. 1 FIG. 2 FIG. 3 FIG. 4 FIG. 5

FIG. 1.—Vision (before operation)—O. D.—light, O. S.—fingers; (after operation)—20/30 both eyes.

FIG. 2.—Vision (before operation)—O. D. 20/100, O. S. 20/200; (after operation)—O. D.—20/20, O. S. 20/60.

FIG. 3.—Vision (before operation)—O. D. 20/100, O. S. 20/200; (after operation)—O. D. 20/20 both eyes.

FIG. 4.—Vision (before operation)—O. D. 20/60, O. S. 20/40; (after operation)—O. D. 20/20, O. S. 20/15.

FIG. 5.—Vision—(before operation)—O. D. 20/100, O. S. 20/70; (after operation)—O. D. 20/20, O. S. 20/15.

Since the inclusion bodies have been found in normal conjunctivae, and in other pathological conditions than trachoma, we are very uncertain as to their real pathologic bearing in the latter. It is possible that the bodies found in gonorrhoea may be the basophilic granulations. The inclusion bodies in trachoma cause less reaction and pus than those found in gonorrhoea. It is a known fact that the inclusion bodies (basophilic granules) are found in the connective tissues of men and the lower animals. In very old cicatricial trachoma, the bodies are chiefly elementary. The leucocytosis found in trachoma may be due to a bacterium, or a parasite, or a toxin in the plasma or in the red cell. Eosinophilia may play a minor role in the causation.

Trachoma innoculation in man takes ten days, while intravenous innoculation is negative. This would make one believe that the infection in trachoma is more liable to be local than systemic. Recently we had a bacteriologic and hemolytic study made in 140 cases, with the following results: Koch-Weeks bacilli found in the epithelial layer in 12 cases; staphylococci in 20 cases; streptococci in 8; pus cells in 8; Morax-Axenfeld in 1; inclusion bodies in 36, and eosinophilia in 15.

A negative blood and spinal fluid Wassermann was found in 38 cases with suspicious luetic histories. In this connection, the Indians of the United States, who are so sorely afflicted with trachoma. have very little lues among them, and not nearly as much gonorrhea as the trachomatous white. It has been demonstrated by a Government survey (by Dr. Daniel W. White) of the Indians of the United States, that the most common carriers of the virus to the Indian students were the schoolroom desks of trachomatous pupils. At the Phoenix Indian School, over 85 per cent of the young Indian students contracted trachoma from school-desks, while in the same room where special desks were cleansed with a 20 per cent solution of phenol three times daily, the pupils did not contract trachoma.

The success of drug treatment (alone) depends on the strain of the virus present, and whether it is a true trachoma. Any astringent drug is harmful if it causes the formation of cicatricial tissue, and in our experience any astringent if used long enough will clear the cornea of the macroscopical and microscopical pannus, thus allowing the rough lid with its infective virus to rub the cornea, causing the formation of connective tissue in the place of the corneal basement membrane.

Silver nitrate has been the drug of our first choice, closely followed by copper sulphate and finally by bichloride of mercury. The other drugs, in the order used, are tannic acid, thiosinamone, boric acid and glycerin, dionin, methylene blue, iodoform, argyrol, acriflavine, ferric sulphate, optochin, jequirity, quinine and yellow oxide of mercury. Neither ion therapy of copper and iodine nor chaulmoogra oil and the analine dyes, ever proved efficient. Neo-silvol and lumosol have not been used long enough to report on their efficiency. Radium applications; in our limited experience, did not alle-

viate trachoma. Violet-ray therapy helped the pannus in a series of cases. In pannus, dionin and jequirity have proven efficient temporarily, but neither should be used for lengthy periods unless the lid condition is relieved. Stretching of the canthi aids pannus by relieving congestion and pressure on the cornea.

Systemic therapy is an aid to any form of treatment. Our results with glandular extracts did not justify their use. It has been our experience that drug treatment must be carried on for at least two years in the very mild cases, and for a minimum of five years in the severe cases, with inspections and record of vision every four months.

Injections of milk in 86 cases, subcutaneously, stopped the iritic pains in many of them, but did not improve the trachomatous lid or eyeball. Subcutaneous injections of rheumatic phylacogen have practically stopped all iritic pain. Subconjunctival injections of cyanide of mercury in 52 cases, were discontinued, as there were no apparent good results. The same can be said of methylene blue, milk, quinine sulphate, magnesium sulphate, chaulmoogra oil, and argyrol. As yet, we are unable to report on bichloride of mercury, neo-silvol, lumosol, or on auto-blood vaccine used subconjunctivally. Diphtheria antitoxin in 286 cases did not prove of any value, and other vaccines have not been a success. The removal of spinal fluid in 10 cases (three times in one patient) gave slight improvement in vision for a few days only. Salvarsan (in 15 cases) and other intravenous drugs were not productive of results. Carbon dioxide snow in 282 cases lessened the hypertrophy for half an hour only, with no permanent good results.

After an experience of over 60,000 operative trachoma cases, we have classified the lesser surgical measures in accordance with their importance, as follows: (1) Sand-paper in all stages, least effective in the papillary type of young children; (2) grattage and bichloride rub in all stages, least effective in the hard-knobbed, cicatricial-island cases; (3) expression in all stages, least effective in the cartilage, with expression; (4) deep scarification of the conjunctiva and cartilage, with expression; (5) removal of the cartilage alone, and with the conjunctiva; (6) removal of the palpebral conjunctiva. Sand-paper causes less pain to the patient and less formation of cicatricial tissue than methods 2, 3 and 4. Vision held up for 18 years in sand-paper cases, on the average, and then finally began to fail.

Pannus dissection is advisable only in the cases where the basement membrane has not been invaded (289 cases). The dissection of the deeper pannus will result in destruction of the basement membrane, with the formation of smooth connective tissue. Perotomy, at its best, is an unwise surgical measure. It very often speeds up the formation of more extensive pannus (398 cases). Peridectomy should not be performed, as the already shrunken ocular conjunctiva cannot afford to lose any of its tissue, and the pannus is very often increased 50 per cent (262 cases). Canthoplasty, stretching of the canthi and the correction of the entropion, will hold the pannus in check for the time being.

FIG. 6 FIG. 7 FIG. 8 FIG. 9 FIG. 10

FIG. 6.—Showing lids closed, tenth day after combined excision.
FIG. 7.—Same patient with eyes open. Vision (before operation)—20/40 both eyes; (after operation)—O. D. 20/20, O. S. 20/15.
FIG. 8.—Vision (before operation)—O. D. 20/100, O. S. 20/200; (after operation)—O. D. 20/30, O. S. 20/20.
FIG. 9.—Vision (before operation)—O. D. 20/200, O. S. 20/100; (after operation)—O. D. 20/40, O. S. 20/30.
FIG. 10.—Vision (before operation)—O. D. 20/100, O. S. 20/70; (after operation)—O. D. 20/15, O. S. 20/20.

The purposes and indications for combined excision are as follows: (1) To remove pathologic tissue; that is, rid the lid of hypertrophy, thus preventing cicatricial tissue; (2) to cut short the long drug treatments, or the lesser surgical measures, and prevent sequelae, such as entropion, ectropion, pannus and the development of such complications as corneal ulcers and iritis; (3) to stop the development of different varieties of trachoma in one lid; (4) to reduce relapses and recurrent attacks to a minimum; (5) to prevent pannus and pannus sequelae, connective tissue formation and deep corneal ulcers, which cause loss of vision; (6) for entropion, ectropion, and other sequelae; (7) for cases where other methods failed; (8) in suspicious, undiagnosed cases, and in other cases where the patients will not carry out any form of treatment long enough, and where the doctor cannot follow up cases; (9) in cases with active, acute trachoma of the first degree, with granules and simple hypertrophy, especially in children; (10) in active

trachoma, with formation of cicatricial tissue, or where such formation is inevitable; (11) in rough, hard-knobbed, cicatricial tissue cases, xerosis parenchymatosis, and simple and gelatinous tarsitis; (12) to do away with inflammatory complications and secretions and promote the disappearance of hypertrophy (Fuchs); (13) by rapid elimination of the disease, thus preventing its spread, especially in large families or institutions, during the course of long treatment; (14) to prevent loss of time from work for industrial workers, and as legal protection for the industrial workers and liability compensation insurance carriers in cases of eye injuries complicated with old trachoma; and (15) in order to be able to correct refractive errors before the formation of connective tissue on the cornea and the destruction of Bowman's membrane.

The success of combined excisions is limited, due to non-preventable causes before operation, in the following types of cases:

(1) Old cicatricial palpebral trachoma, with connective tissue formation on the cornea; (2) old drug treated cases of long duration; (3) corneal ulcers resulting from trachoma, or cases where cocaine has been used *ad libitum* on the cornea; (4) old deep nebulae of the cornea resulting from corneal ulcers, and (5) active corneal ulcers, with complicating iritis.

The proper form of treatment must be decided upon and then carried out by the surgeon. Combined excision will prevent and correct lid sequelae in unusual cases, and help the cornea in the great majority of cases. We have selected a few cases to support our contention that trachoma varies in degree according to the strains of the infective agent.

CASE REPORTS.

Case No. 1, was a man 55 years of age, whose vision was OD. 2/200 and OS. 4/200. He showed entropin, trichiasis, the cicatricial stage of trachoma, and pannus siccus. His lids had been treated for 30 years with a copper stick. After the combined excision his vision was OD. 20/100 and OS. 22/100. The entropin and trichiasis were corrected by the operation. (Any case treated with damaging astringents will not respond to combined excision as it should.)

Case No. 2, was that of a Bohemian girl, 15 years of age. Her vision was 20/30 with either eye. On examination she was found to have a soft beefsteak trachoma. There was no visible pannus, but she could not open her lids on account of their hypertrophy. She had undergone a grattage and bichloride rubs in Philadelphia, but because of lack of improvement was about to be transported. Combined excision was performed and the patient was not transported.

Case No. 3, was an industrial case. Mrs. B., 20 years of age, showed a hard, red hypertrophy. After six months' treatment his vision was only 20/60. Following combined excision and after treatment, his vision was brought up to 20/20. This case has been granted full compensation for loss of sight due to injury, while in reality it was an old case of trachoma. He claimed that he had never had any eye trouble prior to getting a foreign body in one eye. A slow, inactive strain of virus was the cause of this case of trachoma.

FIG. 11 FIG. 12 FIG. 13 FIG. 14 FIG. 15

FIG. 11.—Vision before operation)—O. D. 20/100, O. S. 5/200; (after operation)—O. D. 20/40, O. S. 20/20.
FIG. 12.—Vision (before operation)—O. D. 20/70, O. S. 20/60; (after operation)—20/15 both eyes.
FIG. 13.—Vision (after operation)—O. D. 20/20, O. S. 20/15.
FIG. 14.—Vision (before operation)—O. D. 20/100, O. S. 20/70; (after operation)—20/10 both eyes.
FIG. 15.—Vision (before operation)—O. D. 20/60, O. S. 20/40; (after operation)—20/10 both eyes.

SUMMARY.

1. Removal of the palpebral conjunctiva and careful technic, infection and operative the great majority of cases, and with proper and careful technic, infection and operative deformities will not occur. An intensive and long, postoperative, drug treatment should be carried out.

2. Astringents and other methods employed only reach the superficial structures, while the deeper pathologic structures are surely and slowly progressing.

3. Trachoma appears to be more of a local than a systemic infection, especially in the end circulation of the eyeball and eyelid (small vessels, lymphatics and capillaries).

4. We believe mild or severe trachoma will reach its final stage, with or without destructive sequelae, according to the strain of the virus. Bacteriological studies may finally clear up this contention, and then a prognosis in trachoma will be possible.

5. In our experience, in many thousands of cases, trachoma has been chiefly infectious in the so-called acute stages, ranging in age from babyhood to maturtiy. After maturity the danger of contracting trachoma lessens every year.

6. School-desks, towels and bed linen, and finally, rubbing the eyes, are the most common means of infection.

7. The sequelae, on the average, appear at about the age of 22, where no treatment

has been carried out. Treated cases develop sequelae after 32 years of age.

8. The red blood cells, the platelets, the unnamed floating bodies in the blood and the finding of a symbiotic drug, offer a fertile field for investigation.

PARINAUD'S DISEASE.*

BY

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The case of Parinaud's conjunctivitis which I am reporting is the first of its kind I have seen in my practice. I was called in consultation by Dr. W. A. Harper, who very kindly furnished the following history:

CASE REPORT.

Mr. Blank, aged 40, gave a negative personal and family history. On November 13, 1922, he reported for treatment because of a slight injury to the right eye, November 10, caused by being struck in the face by a cow's tail, matted with cockleburrs.

Examination showed slight inflammation of the conjunctiva, midway between the inner canthus and the cornea. An antiseptic solution was ordered instilled into the eye, every four hours. The patient lived several miles in the country, and was allowed to return home, with instructions to return to the office in four or five days, or earlier if any severe symptoms should be observed. He returned in a few days. At this time, fearing a foreign body was embedded in the conjunctiva, I made a small incision, and with a foreign body spud as a curette, sought in vain for something to account for the continued inflamed spot.

Again ordering an antiseptic lotion, I allowed the patient to return home, with instructions as before. At the end of a week he returned, with the inflammation slightly extended. Treatment was continued for three days more, by which time the lids were slightly swollen, and a slight chemosis was observed. The following day, a slight ulceration of the conjunctiva of the lower lid was noticed, and then a perceptible swelling of the cervical glands. The patient was sent to the hospital, and instead of the 10 per cent solution of argyrol which had been used for one week preceding, a solution of mercurochrome was ordered instilled into eye, every three hours. At the end of another 24 hours, the glandular swelling had increased perceptibly. A microscopical examination of the muco-purulent secretion from the conjunctiva, revealed a streptococcic infection.

Hot applications, with instillations of mercurochrome solution, were kept up. All symptoms began to subside on the second day, and within a week all swelling of the lids had disappeared, the chemosis had subsided and a slight decrease in the glandular swelling was noticed. He had a temperature of 100° F. when he entered the hospital. On the second day his temperature rose to 101.3° F., subsiding gradually in ten days. A slow but gradual improvement continued, and at the end of 90 days from the appearance of the first symptoms, the patient was again normal. No indication of a return of the trouble has been observed.

About 115 cases of this disease have been reported. The etiology is still unsettled. Parinaud first advanced the theory attributing the cause to some infection from the lower animals. Gourfein[1] believes that this rather rare disease is decidedly infectious. He studied 11 cases, bacteriologically, and 6 cases, experimentally. He reports a case which he had the opportunity of studying, both clinically and bacteriologically.

CASE REPORT.

The patient was a young man, a shoemaker, first seen October 15, 1904. He complained of trouble in his right eye. His health was poor. He had had fever and chills at night. There was no cough or expectoration, the respiration was normal, and there were no thoracic or other symptoms. The right upper eyelid was much swollen, red and edematous, with partial ptosis and little mobility; the right lower lid was also swollen, but not quite to the degree of the upper lid. Eversion of the lids showed turgidity of the palpebral conjunctiva and cul-de-sac, which were covered with gray granulations of oval forms and various sizes. The bulbar conjunctiva was hyperemic; the secretion abundant and somewhat purulent; the cornea was transparent and apparently normal, and the lachrymal glands were normal. The vision was normal.

All the facial lymph nodes of the right side (preauricular, retro- and submaxillary, and the parotid) were engorged, hard and painful to the touch, and the skin was red and glossy. The adenopathy preceded the ocular lesion by five days, and disappeared without suppuration, after the conjunctival cure. The treatment consisted in cauterizations of the conjunctiva, with a 2 per cent nitrate of silver solution, hot compresses to the lids, hot cataplasms to the lymph nodes, and cod liver oil internally. The patient left the hospital, cured, November 1, 1904. The adenitis persisted for six weeks.

The clinical aspect of the conjunctival lesions, the adenitis, and the fever indicated to Dr. Gourfein that the case was one of acute tuberculosis of the conjunctiva, and it was with the object of proving the tuberculous nature of the disease that he undertook the bacterial investigation of the case. When the patient was admitted to the clinic, the conjunctival secretion was examined microscopically, after being stained by the Ziehl and Gram methods, but no tubercle bacilli were found, though many of the ordinary saprophytic organisms were seen. Eight tubes of potato, two of glycerin agar and four of Loeffler's serum, were inoculated with conjunctival discharge, and placed in the culture oven kept at 37° C. The tubes of Loeffler's serum and the glycerin agar, examined after 36, 48 and 72 hours, presented grayish colonies, more opaque in the center than at the periphery, and more numerous colonies which were whitish.

The first colonies were composed of xerobacilli of different dimensions, which, when injected into the anterior chamber of a rabbit's eye, produced a slight turbidity of the aqueous humor and iridic hyperemia, which soon disappeared without treatment. The whitish colonies contained staphylococcus albus, and when injected into the rabbit's anterior chamber, similar symptoms resulted. No tubercle bacilli were found in the cultures, and the animals inoculated showed no signs of tuberculosis. Gourfein believes that this infectious disease is caused by a microbe as yet undiscovered.

In Scalinici's[2] interesting review of the 60 cases published up to that time, the author

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, Texas, May 10, 1923.

1. Gourfein: Revue Gen. d'Ophthal., Feb. 28, 1907.
2. Scalinici: Clinica Oculistica, p. 37, 1909.

speaks of it as "still attributed to some infection from the lower animals." As knowledge of the disease has increased, it has become more difficult to maintain this theory of its causation, first advanced by Parinaud but urged for the first time by Gifford. It is only fair to say, however, that a few observers cordially agree with Parinaud, and have in a number of cases brought forward facts which go to corroborate the original explanation, though in Scalinici's opinion these "facts" are not particularly convincing —suggesting coincidence rather than actual causal relation.

In one of the recorded cases, examination failed to show any organism; in at least one other, the tubercle bacillus was found; in others, staphylococci have been found, and in another there was a pseudodiphtheritic bacillus related to the bacillus of fowl cholera. In regard to this, however, it is proper to mention that conjunctival inoculation of the organism, and its introduction into the scarified cornea of a guinea pig, produced nothing even suggestive of the disease.

Scalinici does not think that the discovery of the streptococcus and the staphylococcus takes us very far towards a complete understanding of the disease. It is difficult to believe that either of these could be the cause of a unilateral disease, considering the ease with which these microbes can be conveyed to the other eye, while Parinaud's disease is essentially unilateral. But if it is assumed that, for some unknown reason, the organisms have penetrated more deeply into the tissues than usual, we may perhaps have a clue to the solution of this difficulty, and to the occurrence of the lymphadenitis, also. In conclusion. Scalinici advocates a change of nomenclature to Parinaud's disease, indicating that in the syndrome, or group of symptoms, is something more than a mere conjunctivitis with peculiarities.

The Ophthalmic Year-Book for 1909, mentions several cases. Sinclair and Shennan report a case which occurred in a man 61 years of age, with the well known symptoms of the disease, namely, swelling of the preauricular, cervical and submaxillary glands, and the development of distinct swellings or nodular masses on the conjunctiva. They discuss its pathology, especially in its relation to the presence of the plasma cell. The histological changes depend on the formation in the subepithelial tissue of a variety of granulation tissue, crowded with cells and containing numerous young blood vessels. There are also alterations in the epithelium, with superficial erosions and minute areas of necrosis in the deper tissues.

In these respects, their results correspond more closely with the observations of Verhoeff and Derby than they do with those of Reis, who denies the presence of a necrotic process. Plasma cells predominated in the sections prepared by Sinclair and Shennan, and the appearances observed support the theory that the plasma cells are chiefly derived from lymphocytes by a process of enlargement of the nucleus and of the protoplasm. Many of the lymphocytes had emigrated from the small blood vessels and subsequently undergone progressive development. Cultures from the necrotic areas yielded two varieties of white staphylococci, and from the suppurating glands in the neck staphylococcus albus and aureus were separated, and from one sinus, streptococci. They attempted to institute vaccine treatment, but the patient did not remain long enough under observation to state with accuracy what results followed the treatment.

Schoeler reports a case of Parinaud's conjunctivitis in an infant 18 months old. After eight days of insomnia, chills and depression, a swelling of the eyelids of the left eye was noticed, with corresponding adenopathy. The palpebral conjunctiva was inflamed, thickened and covered with yellowish granulations. The bulbar conjunctiva was merely injected. The cornea was not involved. The preauricular lymph-node was of a semi-fluctuating consistency, and the parotid region was puffy. There was no fever, no glandular suppuration and no modification in the appearance of the lesions, during the three weeks of observation. No bacteriologic or histologic examinations were made.

Basseres and Poujal report a case presenting all the characteristic features of Parinaud's conjunctivitis, and the positive exclusion of conjunctival tuberculosis. This is one of the very few cases, however, in which a corneal lesion has been reported. This lesion took the form of a vegetation, starting from a supracorneal, chemotic swelling, encroaching upon the cornea, and attaining the size of a large lentil. Beneath this vegetation, an anterior synechia was formed.

In reporting two cases of Parinaud's conjunctivitis, Barck records a treatment which he had found efficacious, namely, the removal of the excrescences with scissors, squeezing out the yellow infiltrates with trachoma forceps and the daily application of a 1 per cent solution of copper sulphate.

Wilder's patient exhibited the clinical symptoms of Parinaud's conjunctivitis, but in the discussion of his case, it was suggested by Brown that it might be a case of tuber-

culosis, and in a similar lesion which had been examined by Snydacker, in a boy, aged 4 years, smears demonstrated the presence of the tubercle bacillus.

Oppenheimer also reports a case of Parinaud's conjunctivitis, and Lawson a case under the same title, the accuracy of which he questions, although the symptoms seem to conform to this disease. Nothing characteristic of tuberculosis or trachoma was found in the lesion, which was examined microscopically, by Coats. Calmette's test was not tried.

Krusius and Clausen[3] report two cases of Parinaud's conjunctivitis in which the symptoms were typical. In each case, nodules were associated with a coxcomb-like swelling of the conjunctiva of the lower lid. In one case the disease was apparently grafted upon an old kerato-conjunctivitis. In both instances the Von Pirquet test was positive, although in one a second trial was required to get it. The subcutaneous tests produced marked general, but no local, reactions. Repeated conjunctival instillations of tuberculin in increasing doses, were followed by no trace of local reaction. Inoculation tests with guinea pigs feebly but definitely indicated the presence of tuberculosis. The course of the disease, and the results of the tuberculin and inoculation tests, favor the conception of Parinaud's conjunctivitis as a local reinfection with tuberculosis, occurring in individuals who have acquired relative immunity from a previous infection.

The absence of local reaction to tuberculin, in spite of the presence of a general reaction, is against the possibility of the conjunctival infection being the primary source of the allergic changes in the serum. Failure to produce a local reaction by the instillation of tuberculin, on the other hand, may be explained by supposing that the natural production in the diseased tissues of large quantities of tuberculin precluded any reaction to the small amount introduced artificially.

Rolande[4] records a case of this disease, and gives the syndrome drawn from a review of 111 cases found in the literature. The disease has a predilection for young persons, 25 cases occurring in children under 10 years of age. Systemic disturbances usher the disease in, either preceding or accompanying the development of the conjunctival lesions. Only one eye is involved, usually; although in 7 cases the condition affected both eyes, either simultaneously, or after an interval of time. The conjunctiva may have a general swollen appearance, with the surface divided by broad and deep sulci; or characteristic granulations having their seat, by predilection, in the conjunctiva of the tarsus and fornices, and also in the bulbar conjunctiva, may occur. Their size varies from a pin point to that of the largest trachoma granule. In the acute period they may resemble either the follicle of follicular conjunctivitis, or of trachoma. They are usually of a yellowish color.

The granulations may give rise to formations resembling raspberries or coxcomb, in which they are usually sessile. They may later resemble the flat granulations of vernal conjunctivitis. Occasionally they assume a polypoid aspect. Erosions, frequently covered by a yellowish white exudation or by a pseudomembrane, now and then exist. The bulbar conjunctiva is, as a rule, normal. The secretion is usually mucopurulent in character. The cornea is rarely affected, although pannus with minute ulcers has been met with. The homolateral lymph glands are swollen, the order of their involvement being the preauricular, parotid, submaxillary and cervical. In rare instances, the lymphatics of both sides are involved. Caseation occurred in 32 cases. The duration of the disease is from 2 months to 2 years.

Rolandi concludes that Parinaud's conjunctivitis is not a distinct entity, but rather a clinical syndrome, and, in its classic form, a special type of tuberculosis of the conjunctiva, characterized by an exceptionally benign course and by spontaneous recovery. It has not yet been demonstrated whether this tuberculous form is due to human or bovine tuberculosis.

Verhoeff[5] describes a filamentous organism which he has found to be present in cases of Parinaud's conjunctivitis, and which he believes to be the cause of the disease. He has examined, histologically, 12 cases of Parinaud's conjunctivitis. All the cases presented characteristic histological lesions, and within areas of cell necrosis, characteristic micro-organisms were discovered. The micro-organisms were found in irregular masses, from 10 to 60 microns in diameter, and were composed of filaments. The individual filament is extremely delicate, stains faintly and has single contours. At intervals along the filament, round dots occur, which stain intensely by the modified Gram method. The filaments are usually about the thickness of the influenza bacillus. With the exception of one case, the micro-organisms were found only in, or within the close vicinity of well-marked areas of cell necrosis.

3. Krusius and Clausen: Arch. f. Augenheilk., p. 327, 1912.
4. Rolande: Ophthalmic Year-Book for 1916, p. 113.
5. Verhoeff: Arch. Ophth., Vol. 42, p. 345, July, 1913.

Verhoeff summarizes as follows:

"In eleven out of twelve consecutive cases, each having the clinical features described by Parinaud, and each presenting essentially the same characteristic picture, a minute filamentous micro-organism was found. The absence of any other demonstrable micro-organisms in the lesions, the unusual character of the micro-organism found, their great abundance, and the fact that they were so situated as to explain the lesions, leave no reasonable doubt that they were the cause of the disease. Their occurrence in the areas of cell necrosis, previously pointed out by me, confirms the diagnostic importance of these areas.

"Since no branching of the filaments could be made out, the micro-organism may, for the present, be classed as a leptothrix. So far as I can ascertain, no similar micro-organism pathogenic for man, has previously been described. Now that its morphology in the tissues and suitable methods for staining it are known, its cultivation on artificial media should be accomplished. The experimental production of the disease should also be attempted, monkeys, preferably, being selected for the purpose."

T. Walker Weaver and W. G. Gillett[6] reported the following case of Parinaud's conjunctivitis with eosinophilia:

A white woman, aged 31 years, came under treatment for swollen eyelids, and a large tumor mass on the right side of the neck. The first indication of trouble had been swelling of the eyelids, but this was shortly followed by appearance of a tumor mass in front of the right ear. These symptoms lasted for about 5 weeks and then gradually subsided, disappearing at the end of 10 weeks. Ocular examination showed the bulbar conjunctiva to be red and edematous, but without granulations. On the palpebral conjunctiva, however, there were numerous granulations not like trachomatous granules. At the center of the upper lid, a polypoid projection measured about 5 mm., and was thicker at the base than at the apex. Small, grayish-white ulcers were scattered over the conjunctival surface.

The blood picture in this case was interesting, in that it presented an eosinophilia of from 5 to 7.5 per cent at different times, gradually falling to 0.5 per cent, as the local condition approached a cure. Although no histologic examination of tissue was made, this is believed to have been a true case of Parinaud's diseases; it had a typical history, typical clinical findings, and ran a typical course. A review of published cases shows that there have been but two previously reported in which differential blood counts were made, and in one of these, there was an eosinophilia of 8 per cent. If such findings should be substantiated by further investigations, another important diagnostic sign would be provided for the affection.

There is a special form of conjunctivitis which involves the conjunctivae of the upper and lower lids and the fornices of only one eye, and which is characterized by a swelling, affecting particularly the upper eyelid, moderate mucopurulent secretion, and marked and constant enlargement of preauricular and cervical lymph glands on the same side. Many authors think that the affection is tuberculosis, some even claiming that animals inoculated with material taken from patients suffering from this affection, came down with symptoms of tuberculosis.

Benincasa[7] reports 2 cases of Parinaud's conjunctivitis, and appends histologic and biologic data. Animal inoculations with material from both cases (injections into the anterior chamber of the eye in rabbits, and into the peritoneum of guinea pigs) were totally negative, as were all attempts to demonstrate the presence of the tubercle bacillus in the affected tissues and secretions. Histologic investigation of the lesions disclosed a picture similar, in some respects, to those of typical tuberculosis structures (presence of Langhans' giant cells, accumulations of epithelioid cells, small areas of necrosis, marked lymphocytic infiltration). In many other respects, however, the lesions were clearly unlike tuberculosis formations. Aside from the absence of tubercle bacilli and of any trace of caseous degeneration, the lesions contained blood capillaries and were definitely limited (rather like adenomatous formations), bearing no resemblance to tubercles, even macroscopically. The nature of the findings in the 2 cases reported, is thus not such as to justify the inference that Parinaud's conjunctivitis is a tuberculous affection.

Up to the present time, the etiology of Parinaud's conjunctivitis has not been definitely established. The following theory, which I propose, is in keeping with our present knowledge of anaphylaxis and protein sensitization:

A person who is sensitive to the protein of mountain cedar pollen, very quickly responds to a dose of it, whether administered locally on a mucous surface, or by vaccination, or by hypodermic injection of a weak solution under the skin.

The local response is characterized by swelling of an oedematous character if the application is made on a mucous surface; if by vaccination, or by hypodermic injection, within 30 seconds or one minute, there will appear at the site of the application, a typical wheal such as is often seen in nettle-rash. This will be followed by a red areola, extending to a radius of 2 inches or more, dependent upon the size of the dose of the protein used, and will be accompanied by swelling of an oedematous character, the duration of which will vary with the dose, from 24 to 72 hours. Eleven hours after the local administration of a moderately large dose of cedar pollen protein, there will follow, in some subjects, constitutional evidence of the presence

6. Weaver, T. W. and Gillett, W. G.: "Parinaud's Conjunctivities with Eosinophilia," Amer Jour. of Ophth., Vol. 6, p. 36, Jan., 1923.

7. Benincasa, Giuseppe: "Parinaud's Conjunctivitis; Pathologic Considerations," Gior di Ocul., Vol. 3, p. 180, Dec. 1, 1922.

of the poison, in the shape of an attack of bronchial asthma.

These phenomena can be experimentally reproduced at any time, upon persons who are sensitive to this particular protein. It has been shown in recent years, that what is true of the cedar pollen protein, is true of a large number of other proteins, whether found in the food, in the pollen of plants or trees, or in the hair of animals or the feathers of birds. The resistance of different individuals to the effect of these proteins, varies widely, some possessing a very light resistance, others very low resistance. It has been observed that when resistance to the action of the protein is once overcome by an excessive dose, one is ever afterwards sensitive to that particular protein—in other words, he becomes sensitized. Whether he absorbs it through the intestinal tract or some mucous surface, the phenomena above described supervene. When the local effect reaches its maximum, it so impairs the resistive power of the adjacent tissues to infections of every sort, that a local affection, due to some infection other than the proteins, may readily come into being.

In the case of Parinaud's conjunctivitis that I reported at the beginning of this paper, is it not plausible to assume that the conjunctivitis had its origin in a local infection with the specific protein of the cow hair, and that the simple conjunctivitis thus produced, so lowered the defensive power of the conjunctiva and the tissues adjacent thereto, that the infection readily developed into an active state, and extended through the lymphatics to the glands of the neck?

TREATMENT OF CHEMICAL BURNS OF THE EYE.*

BY

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Injuries of the eye from chemicals may be grouped according to their intensity. The mild cases require little treatment, other than a soothing collyrium, while severe injuries, in which there is complete destruction of the conjunctiva, may require the grafting of mucous membrane to take the place of the destroyed conjunctiva. Denig advocates the removal of the burned conjunctiva immediately after the injury, replacing it by mucous membrane from the mouth. This is contrary to the views of Wilder and many others, who do not interfere until granulation is well under way. But in the cases most frequently seen there is not, primarily, a complete destruction of the conjunctiva, though if the mucous membrane is not protected from irritative secretions, and kept separated from the opposing mucous membrane, there will later be sloughing and formation of symblepharon. It is to this type of cases that the method of treatment I will describe is applicable.

Starr has devised an effective method for the prevention of adhesions between the lid and eyeball, after injury from chemical burns. His operation consists of dividing the affected lid from its margin to the deepest portion of the cul-de-sac. The incision is made vertically through the center of the lid and involves all structures, skin, muscle, tarsal plate and conjunctiva. The two halves of the lid are turned back and stitched one to the side of nose, the other to the cheek, where they are held until covered by new mucous membrane; then the cut edges are "freshened," and sutured back in place.

This seems to be a radical procedure and many patients will object to having the lids divided. By modifying this method, good results may be had without the incision being made through the lids, with the resulting scar formation. The lids are turned and two or three sutures are passed through the retrotarsal folds then carried to the forehead for the upper lid and to the cheek for the lower lid, where they are held by adhesive tape until the burned conjunctiva has healed. The exposed conjunctiva and cornea should be kept covered with a dressing of sterile petrolatum, and irrigated frequently with boric acid solution, care being exercised to prevent drying of the cornea. For a short time at night, the sutures may be released and the lids allowed to turn back in place, to let the patient rest from the frequent changing of dressings. The result, in most cases, will be the complete restoration of the fornix, and the unimpaired mobility of the eyeball. By facilitating the dressing of the injured surfaces, and by keeping infectious discharges away from cornea, this treatment enhances the prospects of preserving the latter.

The following case is of interest, in that the greatest damage to the cornea was from the irritative secretions and interference with its nutrition, rather than from the original injury, as evidenced by the fair vision which he had soon after the accident.

CASE REPORT.

On Sept. 27, 1921, while using a blow torch to repair a recently charged battery, an explosion occurred, and hot sulphuric acid from the battery was splashed into the right eye of the patient. When he reached my office, fifteen minutes later, the con-

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, Fort Worth, May 10, 1923.

junctiva was blanched and the cornea was slightly cloudy. The external surfaces of the lids were not burned. The conjunctival sac was irrigated with sodium bicarbonate solution, and cocaine was instilled to relieve the pain. The vision in the right eye was 20/200; in the left eye, 20/20. Local treatment of atropin, argyrol, and sterile petrolatum, was ordered. The following day, the conjunctiva was swollen and dark red, being intact but evidently severely injured. The cornea was clearer and the vision was slightly better than immediately after the injury.

By October 1, the bulbar conjunctiva was intensely edematous and beginning to slough. The tarsal conjunctiva was swollen and hyperemic, and showed several eroded areas. The cornea was becoming cloudy, some portions of it being moderately opaque. The vision was counting fingers at three feet.

The patient was placed in the hospital, and ordered to stay in bed. The upper lid was turned, and two silk sutures were passed through the upper margin of the tarsal cartilage, and then carried to forehead, where they were fastened by adhesive tape. A small lid hook, made from wire and wrapped with cotton soaked in petrolatum, was inserted in the lower cul-de-sac and then fastened to cheek. The lower lid was released for a few hours at night, to protect the cornea while the patient slept.

On October 8, the lids were released, since there was very little secretion, and the conjunctiva was healing nicely. The upper third of the cornea was cloudy, but the remainder was moderately clear. Dionin was continued, to clear the cornea.

On January 12, 1922, there was a small band of adhesion in the upper fornix, which interfered very little with mobility of the eyeball. The vision in the right eye equaled 20/70, and the patient was able to resume his former occupation, that of a railway fireman.

With the increased use of the automobile, battery explosions have become one of the common industrial accidents, hydrogen gas being generated during the time the battery is on charge, increasing as the point of electrical saturation is approached. This gas, which is highly inflammable when mixed with air, accumulates in the dead space within the battery, above the liquid, and may be ignited by an electric spark, a glowing cigarette or a welding torch. Mechanics in garages and battery stations, should be warned of this danger, and required to wear protective goggles, large enough to prevent any acid from reaching the eye. In every shop where batteries are repaired, there should be a large bottle of a sterile, saturated solution of sodium bicarbonate, and an eye cup. Immediately after an accident, the eye should be irrigated thoroughly with this solution, in order to neutralize any free acid that may be present; then the eye should be filled with sterile petrolatum, and the patient sent immediately to a physician.

Attention has been called to the greater prevalence of burns of the eye, on account of the increased use of chlorinated lime for household purposes. In such accidents, the particles of lime should be removed and the eye irrigated with a weak solution of vinegar, to neutralize the caustic effect of the lime. The manufacturers caution that chlorinated lime decomposes when exposed to high temperatures and to dampness, and in order to avoid accident, recommend that a small hole be punched in the container, to allow escape of the gas before removing the top of the can.

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DIAGNOSIS AND TREATMENT OF EXOPHTHALMIC GOITER.*

BY

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Exophthalmic goiter is a metabolic disease. The secretion of the thyroid gland is increased, and acting as a hormone, stimulates cell combustion. This increase in cell combustion has its effect clinically upon the patient in about the following chain of symptoms: mental irritability, tachycardia, muscular weakness, exophthalmos, vasomotor disturbances.

Each one of these symptoms may be mild, moderately severe, or severe. The mental condition may vary from a slight apprehensiveness, to the wildest delirium. The tachycardia may or may not be pronounced, but is always present. The exophthalmos may be almost imperceptible, or the individual may be wild-eyed and "starey." The muscular weakness varies from a slight weakness of the quadriceps to complete prostration. The vasomotor disturbance always exhibits itself in a moist, warm skin; the least exercise being followed by perspiration, sometimes to a marked degree.

Enlargement of the thyroid gland is symmetrical. There is no uniformity as to the size of the gland, but, generally speaking, it is not markedly enlarged. In some cases, there is no enlargement whatever. In the early stages the appetite is usually increased, but later on in the disease the appetite may become indifferent, or nausea and vomiting may intervene. Weight loss is an important factor, though as pointed out by Pemberton, some very toxic cases do not show weight loss early, due to the large amount of food intake and assimilation. These he speaks of as "anabolic types." On the other hand, weight loss may be an early symptom due to

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poor appetite and assimilation, and these Pemberton classifies as the "catabolic type."

Given a case with tachycardia, exophthalmos, nervousness, enlargement of the thyroid gland, and loss of weight and strength, there is no difficulty in designating it as a case of exophthalmic goiter. But in the early case, in which the symptoms are not marked, it is easy to be mistaken in your diagnosis, and the two diseases most difficult to differentiate are *neurasthenia* and *incipient tuberculosis.*

There is a large group of patients who have many symptoms in common with exophthalmic goiter. However, if you go into the case carefully, you will not experience much difficulty in separating this group from that of true exophthalmic goiter. The neurasthenic comes slowly into the doctor's office and rather timidly, and sits down in a languid position, making an effort to look sick. There is an exaggeration of their many complaints. They may complain of a choking sensation in the neck, of hot flashes, or of a palpitating heart, but on questioning closer, the tachycardia will be found to be quite variable in its nature. There will likely be a cold, clammy skin, rather than the warm, moist skin of exophthalmic goiter. The muscular weakness is more subjective than objective. You ask such a patient to get on the table, and often she tells you that she cannot do it, but with a little insistence you find that she is able to do so, without any apparent weakness of even the quadriceps.

The patient with exophthalmic goiter comes into the doctor's office with a high head, sits down on the very edge of the chair, and is intensely alert to everything that is going on about her. She minimizes her condition. Objectively, there is found a rapid, bounding pulse and a warm, moist skin. When asked to get upon the examining table she starts at her task quickly, and is chagrined when it becomes apparent that the quadriceps are so weak that assistance is needed.

Both groups may have some enlargement of the thyroid gland. But in exophthalmic goiter, a thrill and bruit are found over the gland in 80 per cent of the cases. In the neurasthenic case, only the carotids can be heard, which are heard more distinctly near the clavicles. The goiter patient usually has a good, if not excessive, appetite, but will show loss of weight, often, in spite of an increased diet. The neurasthenic is finicky about her eating, but maintains her weight or has lost it gradually, due to a poor appetite.

The metabolic test is an excellent one, if carried out in a well conducted laboratory. This test will be very valuable in the border line cases, in which the clinical symptoms and objective signs are not enough in themselves to make the diagnosis.

There is little in common between tuberculosis and exophthalmic goiter, and usually the diagnosis can be cleared up, if an accurate temperature chart is taken, and the chest and sputum are carefully examined. If the goiter patient runs a temperature, it must be remembered that the temperature is due to some accompanying infection, and not to the goiter. There is one other clinical evidence that points strongly to goiter, when there is a doubt as to whether it is tuberculosis or neurasthenia. That is a relatively high pulse pressure, which is present in nearly all cases of toxic goiter, and is usually absent in both tuberculosis and nervous exhaustion.

Goiter patients are treated surgically, medically or with the *x*-ray. I will only dwell on the surgical treatment in this paper. Pemberton divides these cases into three groups, as follows: "First, the patient on whom a thyroidectomy can be performed; second, patients on whom the wisdom of thyroidectomy is doubtful, and third, patients in whom indications for extended observation or preliminary measures are clearly defined."

Group 1. Primary thyroidectomy is indicated in patients with mild hyperthyroidism, in whom there has been little or no loss of weight, and who are able to perform their usual daily duties. Occasionally, there will be found one in whom the metabolic rate, in spite of the mild clinical symptoms, is very high. Therefore, the routine taking of the metabolic rate will occasionally prevent one from operating on a very toxic case, that is not shown by the symptoms to be such.

Group 2. In this group of patients are those who may not have lost a great deal of weight, but such weight loss has been acute and recent, or in whom there is moderate or marked weakness in the quadriceps muscles or edema of the ankles, or in whom there is an unusual apprehensiveness. If there is any question, it would probably be better to do a single ligation, and if this is not followed by a reaction of any marked degree, the gland may be removed in a few days. In other words, this is a group of patients in whom a ligation is used more to test the individual resistance than as a therapeutic measure. If even a moderate reaction follows the ligation, it is safer to ligate the other pole in a few days, allowing some time to elapse before doing a thyroidectomy.

Group 3. That this group of patients are very sick people, is evidenced by a marked, recent loss of weight, extreme nervousness, cardiac dilatation, secondary infections, or

perhaps a gastrointestinal upset. There may be added to this, as is pointed out by Pemberton, any patient, regardless of his clinical symptoms, who has an excessively high metabolic rate. It is in this group of patients that the strictest care and rarest judgment must be observed, or the mortality rate will be high.

Many of them are too sick for any surgical procedure whatsoever, and they should be put to bed with an ice pack on the heart and given tincture of digitalis. In recent months, it has been suggested by Plummer that Lugol's solution does much in getting them in shape for further treatment. After a period of rest, a single ligation is performed. In some instances, even preceding this, it may be wise to inject a little boiling water into the goiter, more as a test of what the patient can stand, than for any therapeutic effect the water might have. After a week, if the reaction is not too severe following the first ligation, a second ligation is done, and the patient allowed to rest for two or three months before having the gland removed. It is well to keep in close touch with these patients following this procedure, so that they may be operated at the peak of their improvement.

In a large series of cases handled in the Mayo Clinic, it has been found that 80 per cent of the patients treated in this manner, will gain approximately 20 pounds in weight in two or three months, and will return in far better shape for a surgical procedure.

THE PREOPERATIVE AND POSTOPERATIVE MANAGEMENT OF EXOPHTHALMIC GOITRE.*

BY

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The observations on which this paper is based cover some three thousand exophthalmic goitre cases, and the routine given has been slowly evolved and has been found to be adequate for the handling of such cases. This routine is meant to be applied to the very toxic cases—the bad risks, and is not necessary for the mild cases of hyperthyroidism and the nontoxic cases.

Patients suffering from hyperthyroidism are so extremely nervous, irritable and sensitive, that the preoperative management is just as important as the operation. If they are handled like ordinary surgical cases, many of them die during operation or soon afterward. Or, if they do not die, the operation has to be hurried so much that enough gland is not removed and full benefit is not received from the operation. Since adopting this routine, we have found no patient so toxic that he could not be operated on, and the mortality has been cut down to less than 1 per cent. At one time there were 395 cases between deaths.

We must remember that hospital activities and operations frighten the average patient; and since the class we are dealing with here are far more easily frightened, we must do all we can to relieve the situation. The surgical treatment of this disease begins when the patient enters the front door of the hospital. All accommodations must have been arranged in advance, and the patient passed quickly and quietly to her room. It is impossible to treat these patients in the open wards, where there is so much going on. They are to remain in bed continuously. Visitors, house-staff and nurses, should be careful not to mention operation. Every effort should be made to assure the patient that everything is going to be well with her. No formal history should be taken and no examinations made until the patient is entirely tolerant to the surroundings. A thorough history is taken and physical examination made a little at a time, care being taken not to tire or upset the patient. Sometimes it takes several days to get through with this part of the procedure.

The most important points in the history are, loss of weight, duration of the symptoms, crises, and whether or not the patient has been able to go about her household duties. The most important part of the examination is that of the myocardium. This must be worked out as far as possible, using functional tests if necessary. The metabolism test helps to determine whether the patient is in the quiescent or rising phase of the cycle, but clinical judgment is far more dependable. Some of the most toxic cases, and cases with the worst hearts, will give low metabolic readings if caught in a quiescent stage. The adrenalin sensitization test, if properly done, and more especially if correctly interpreted, gives some insight into the amount of kinetic drive the patient has at that particular time, and helps to determine whether a preliminary ligation should be done. The phenolsulphonphthalein test is very important because of the larger amount of waste products from the long-continued increase in metabolism. The kidneys are sometimes "hard hit" and their function is low. On a series of 500 cases, 80 per cent were found to have an appreciable loss of kidney function and 15 per cent were below 40 per cent in two hours excretion.

The preoperative therapy should be as follows: In cases where the disease is of long

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standing, or where there is evidence of myocarditis, tincture digitalis, 20 minims every four hours for twenty doses, is given. The same treatment is given where marked tachycardia exists—not that it will reduce the rate, but because it will prepare the myocardium for the added load that is to be thrown upon it by the operation. This prescription is often repeated between ligations, and always before thyroidectomy. Thirty grains of sodium bromide, twice daily, helps to keep the patient quiet. Morphin does these people very little good. They will tolerate even larger doses than will cases of peritonitis. The night before and the morning of the operation, two grains of dessicated thyroid extract should be given.

The following measures when carried out a few days before operation decrease the mortality markedly and cut down the kinetic drive of the patient to a large degree. The operating clothes are put on the patient at the time of admission, and it is explained to her that these clothes are preferable to hers because of the frequent examinations that have to be made. A hypodermic of sterile water is given every morning at 8:00, and at 9:00 the anaesthetist gives her a few whiffs of gas in bed, but not enough to put her to sleep. The dose is increased a little every morning. It is explained to her that this is being done for her heart. Some rational explanation has to be forthcoming quickly, because these patients are very inquisitive and suspicious. Breakfast is taken soon after the inhalations. On the day of the operation, a hypodermic injection of morphin, grains 1/6, and atrophin, grains 1/150, is substituted for the sterile water usually given. The gas inhalation is given, as usual, and the ligation or thyroidectomy is done in the room, if it is a very toxic case; if not, the patient in transported to the operating room under light gas anesthesia. Analgesia is all that is required, because that takes away all anxiety, and it can be continued for several hours without harm. I consider this one of the most important points in the handling of serious goitre cases. If toxic cases are carried to the operating room like ordinary surgical cases, by the time the operation is begun the heart rate is greatly increased, nervousness is exaggerated and the patient is in poor condition for surgical procedure. I have seen this fact demonstrated several times, and I have seen two such patients die on the way to the operating room.

There are any number of combinations that can be worked out to deceive the patient as to the time of the operation. We usually give patients who know about the routine, and especially doctors who develop the disease, opium by the mouth, and operate at the time of the first inhalation, because they are looking for several days of inhalations. If the operation is done in bed, the wound is injected deep with quinine and urea, which keeps the area anaesthetic for two or three hours. All operative material is removed from the room, and often the patient does not realize for some time that anything has been done.

When to ligate and when to do thyroidectomy, may be summed up, in short, by ligating in case of doubt. Ligation is always done if the disease is acute and of the type that has crises. If the heart rate remains above 110, with the patient quiet in bed for a week or so, or if there has been a sudden loss of weight, and marked nervousness, ligation is indicated. It is best to ligate one superior thyroid artery, and in a few days the other. The patient is then sent home on the postoperative orders listed below, and the thyroidectomy is done when she reaches her maximum benefit. This is usually obtained two or two and one-half months after the ligation. If the patient is allowed to go past this point, she begins to break and loses ground very rapidly. The sympathetic nerve supply to the gland, the thing that governs its activity, re-establishes itself almost completely in three months, and the symptoms reappear rapidly. If these patients are not followed up closely, they get such marked improvement from the ligations that they fail to show up at the designated time, and when they do come back, they are in the same condition in which they first presented themselves.

Postoperative orders are as follows: Fowler's position, so the patient can clear the throat of mucus more easily; morphin, grain 1/6, every hour, if necessary, to keep the patient perfectly quiet. Water is given by all routes, and the more that can be put in, the sooner the patient will recover from the operation. By hypodermoclysis, 1500 c.c. is given twice daily. A rectal tap of 400 c.c. of sodium bicarbonate and glucose, 5 per cent solution, is given every four hours, and also water by the mouth. If the patient can retain 5000 or 6000 c.c. in the first twenty-four hours, she will be very much better off. The high metabolic rate requires large quantities of water, and it is the best agent we have to combat tachycardia. An ice cap is kept on the heart continuously. Steam inhalations of compound tincture of benzoin is the best thing we have to loosen the mucus that forms in the trachea. This is a source of irritation, and the patient uses up a lot of energy trying to expel it when it is thick.

The temperature is taken every hour, and the following routine is employed to control its rise. For a temperature of 101° F., 4 ice bags are given; for 102°, 8 ice bags; 103°, 12 ice bags, and 104°, an ice pack. The ice pack is the only thing I know that will control the rising temperature, pulse rate and delirium that accompany a temperature of over 104° F. After this, the heat center goes to pieces, the patient simply loses all control and soon dies. When it is remembered that with every degree of temperature above the nornal, metabolism increases 10 per cent, it is no wonder that these people soon burn up. To use the ice pack, the patient is placed on a rubber sheet and covered with 150 pounds of finely crushed ice, only the nose remaining out. An electric fan is turned on, to make the ice melt quickly, and continuous rectal temperature is taken. The pack is discontinued when the temperature drops to 101°, which point is reached in from twenty to thirty minutes. If the pack is not stopped promptly, the temperature will drop to 94° or below, very quickly. This is a radical measure, but without it practically all of these patients die.

The first dressing of the incision is done at the end of twenty-four hours, when the rubber drain is removed. The skin clips are removed on the third day. For induration and serum, alternating hot, wet dressings and electric light are used. They serve to clear up the situation very quickly.

If these patients are operated on and allowed to go home with the usual surgical instructions, there is an unusually large percentage of recurrences. The following instructions have been found to be adequate. Breakfast must be taken in bed; then the patient is allowed to be up from 10 to 2 and 5 to 8. These hours may be gradually increased to include the entire day by the end of the fourth month. The diet should include everything except dark meats, tea, coffee and condiments. No highly seasoned food should be taken. Anything that swims or flies may be eaten, including all kinds of sea food and fowl. No shows, parties or other exciting pastimes should be indulged in. The patient should be instructed to busy herself with the care of chickens, etc., to take up the time. Her whole aim in life is to get fat and lazy.

CONCLUSIONS.

By using the combinations of small things as outlined above, the mortality in very toxic cases can be cut down to less than 1 per cent, the percentage of cures can be greatly raised, and no case will have to be turned away without being helped.

PERIPHERAL NERVE LESIONS OF THE HAND.*

BY

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This paper is presented to call attention to peripheral nerve lesions. My observations for the past two or three years lead me to believe that the average physician pays too little attention to such pathological states, and that the patient suffers much inconvenience in consequence. Many patients are allowed to go for years or for life, with such crippling lesions, when a better understanding of them would result in proper measures being taken to insure a more or less complete return of function. It is well known that regeneration of a functionally

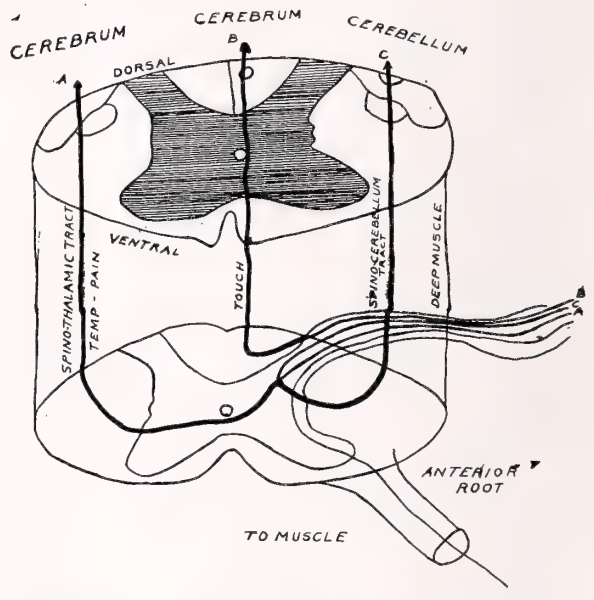

FIG. 1.—The three afferent systems, although they travel in the same sensory nerve, ascend the cord in widely divergent areas and reach different brain areas—(A) to the optic thalmus; (B) to the cerebrum; (C) to the cerebellum.

severed spinal nerve takes place more or less completely when the severed ends are properly reunited, and it is universally known that the return of function is gradual, but apparently few know in what sequence, or manner, the return takes place.

We will discuss only the peripheral nerves of the hand, although what is said of the nerves of the hand applies as well to the other peripheral nerves of the body. These nerves may be functionally severed by cuts or severe bruises, crushing injuries, bone fractures, long continued pressure, as by callus, and by scar formations in the region of the nerve, which are by no means uncommon.

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At the end of the third day following division of a peripheral nerve, the myelin is divided and the axis cylinder is ruptured; at this time electric conduction is lost and the muscle tone is destroyed. The muscles supplied by the divided nerve then travel toward fibrosis and contractions and rigidities form. If the nerve is completely divided, no electrical responses are obtainable after a month. Regeneration of the

FIG. 2.—Two cases of complete division of the ulnar nerve. In case No. 1, the nerve was divided 6 cm. above the wrist fold, while in case No. 2, the nerve was divided at the elbow.

nerve begins very soon after reuniting the severed ends and is a long, slow process, varying as to the length of the distal portion of the severed nerve and varying in different individuals. Infection of the wound usually delays the regeneration. The best results, so far as time of regeneration is concerned, are obtained by immediate primary suture of the divided ends, where healing takes place by first intention. Secondary suture may be done at any time with good results, and cases have been reported where regeneration and functional return were successful even after fourteen years of division.

The following tests may be carried out to determine the area of functional loss, and thereby the nerve or nerves that have been severed: (1) Light touch; (2) pressure touch; (3) superficial pain; (4) pressure pain; (5) temperature—varying degrees of warm, hot and cold; (6) appreciation of roughness; (7) vibration; (8) localization of touch, pain or pressure; (9) compass test for one and two points; (10) knowledge of position; (11) appreciation of passive movements; (12) appreciation of weight; (13) appreciation of size; (14) appreciation of shape in two dimensions.

For ordinary, practical purposes, it is usually sufficient to test as follows: (1) Sensation for light touch, which is done, not with end of the finger, pencil or some instrument, but with a wisp of fine cotton wool or Von Frey's graduated hairs, gently applied to the skin so as not to produce pressure; (2) sensation for pain, which is done with a

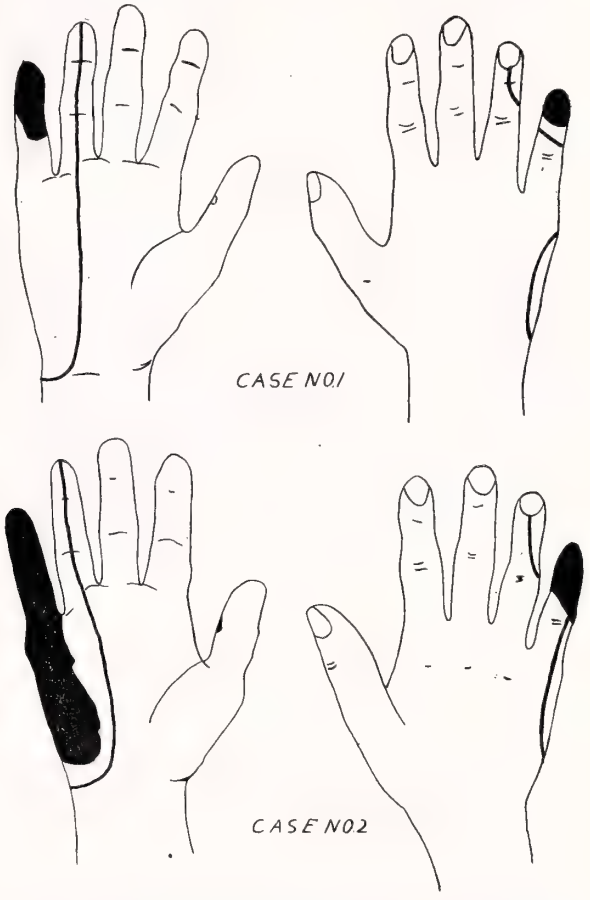

FIG. 3.—Two cases illustrating sensory loss produced by division of the ulnar nerve below the point where the dorsal branch is given off.

fine, sharp needle, care also being exercised not to produce pressure, and to differentiate the patient's responses as to the sensation of pain or of pressure unaccompanied by pain; (3) responses to the different degrees of temperature, the extremes being, cold below 20° C. and heat above 50° C., and the

ability to recognize the difference in the intermediate degrees of temperature—that is, between 25 degrees and 40 degrees C.; (4) compass test, the ability to distinguish one and two points of the compass, the two points being applied simultaneously at varying distances, according to the part to be tested and the responses on the correspondingly normal side—the compass points should be dull and not sharp, and may be applied longitudinally to the part to be tested; (5) passive movement, by moving the part being tested and asking the patient to indicate when he can appreciate the movements; (6) pressure to touch, which can be roughly tested by some blunt object, the temperature of such object not differing materially from that of the part being tested.

By means of these tests the areas of lost sensation can be mapped out accurately, and often to a line. When such areas are mapped out it is found that the areas where painful prick and the extremes of temperature, below 20° C. and above 50° C., are lost will vary considerably from the areas where light touch, correct responses to the compass points and the intermediate degrees of temperature, between 25° and 40° C., are lost. The area where responses to light touch, the compass points and the intermediate degrees of temperature are lost, corresponds very closely to the so-called anatomic area supplied by the individual nerve, indicating that there is very little overlapping of the fibers of this system, while the area where responses to painful prick and the extremes of temperature are lost is usually much smaller than the anatomic area, indicating that there is considerable overlapping of the fibers of this system from the adjacent nerves.

Henry Head tells us that the sensory mechanism in peripheral nerves consists of three systems, which he names:

(1) Deep sensibility—giving correct responses to pressure and to movements of parts. The fibers of this system run mainly with the motor nerves and are not destroyed by division of all the sensory nerves to the skin. It is here that mistakes are apt to be made in testing for touch—that is, the patient may respond to a touch made other than with a fine wisp of cotton wool applied gently to the skin.

(2) Protopathic sensibility—which responds to painful prick and the extremes of heat and cold. This form of sensibility does not appreciate the locality of the spot stimulated, but produces a rapidly, widely diffused response. Head calls this the great reflex system.

(3) Epicritic sensibility, which responds to light touch, the points of the compass, the intermediate degrees of temperature and appreciates the locality of the spot stimulated.

These three systems all ascend through the afferent nerves until they reach the cord, where they diverge widely, as shown in Figure 1. So we see that brain or cord lesions would not produce the same character of sensory loss as that following injury to the peripheral nerve.

For the sake of brevity, the terms epicritic and protopathic, will be used throughout the rest of the paper.

FIG. 4.—Two cases illustrating sensory loss produced by division of the median nerve. In case No. 1, division occurred at the wrist, in case No. 2, at the elbow.

In making the sensory tests, to map out the various areas of sensory loss, it is well to bear in mind some of the conditions necessary for correct and reliable testing. The examination should be conducted in a quiet, warm room, and should be free from interruption, which might queer the tests and necessitate their being done over. The patient should be told as much as is necessary to set his mind at ease and avoid

embarrassment and confusion. These tests are best conducted when the surface to be tested is at body temperature, or at least not cold, as that part which, under normal temperature conditions, responds to the epicritic tests, will fail to respond after being chilled. If goose flesh is present, the tests should be delayed until it has disappeared. Perfect epicritic responses may be entirely destroyed for the time being by immersing the hand in cold water. Much patience is necessary, as the patient's responses vary at times and are often confusing. It is best to avoid the use of such terms as "Do you feel this?" "Am I touching you now?" etc., but to make sure that the patient understands what is expected of him and to remain silent during the test.

The extent of the anesthetic areas varies with each patient. In Figure 2 will be noted two illustrative cases of complete division of the ulnar nerve. In the upper one the nerve was divided 6 cm. above the wrist fold, while in the lower the nerve was divided at the elbow. The darkly shaded area represents the loss of sensation to pain and the extremes of heat and cold—that is, the protopathic loss, while the area enclosed within the line represents the loss to light touch, the compass points and the intermediate degrees of temperature—that is, the epicritic loss. It will be noted from this that the line representing epicritic loss corresponds fairly well to the anatomical area of the distribution of the nerve, and indicates very little overlapping of epicritic fibers, while the line of protopathic loss would indicate considerable overlapping of the protopathic fibers from the adjacent nerve. In Figure 3 will be noted two illustrative cases of loss of sensation produced by division of the ulnar nerve below the point where its dorsal branch is given off. It will be noted that the palmar epicritic loss corresponds closely with the anatomical area, while on the dorsum this loss does not take in so extensive an area as when the nerve is divided above its dorsal branch.

In Figure 4 will be noted two cases illustrating the anesthetic areas when the median nerve is divided. In the upper case the nerve was divided at the wrist, while in the lower case it was divided at the elbow. Note the increased palmar protopathic loss where the nerve was divided higher up, while the dorsal protopathic does not vary so much.

In Figure 5 will be noted the anesthetic areas caused by complete division of both the ulnar and median nerves. In both cases the nerve was divided at the wrist.

In Figure 6 will be noted the anesthetic areas produced by division of the radial and external cutaneous nerves. In the upper figure the radial was divided just after it passed under the tendon of the supinator longus and the posterior division of the external cutaneous nerve was divided at the bend of the elbow. The protopathic area was nearly as extensive as the epicritic, but a small area sensitive to epicritic but not sensitive to protopathic stimili was present

FIG. 5.—Two cases illustrating sensory loss caused by complete division of both ulnar and median nerves at the wrist. These cases illustrate variations in different individuals.

on the dorsum of the hand. In the lower figure the radial and external cutaneous nerves were divided in the lower third of the forearm, where the jagged scar shows. The epicritic and protopathic areas of loss were identical, except for a triangular area on the back of the wrist, 5x4 cm., where epicritic was not lost, although protopathic was lost.

The return of sensation to the area supplied by the divided nerves of the hand, varies with each individual, and also varies with the manner in which the divided nerve is handled. If the nerve is sutured and heals by first intention the return of sensation may be complete. The first sign of recovery is the gradual retreating of the line

of protopathic loss from the palm, and then the fingers, joint by joint, until protopathic loss no longer exists. Sensations for painful prick and the extremes of temperature, return closely together, although cold returns before heat, and as this area recovers the stimuli are more painful than over the normal area. Epicritic return does not begin until protopathic return is complete, and it is first noticed by the epicritic border becoming less definite. The epicritic loss gradually recedes toward the end of the fingers, as did the protopathic. Suppuration in the wound or the nerve left unsutured delays the return of sensation and it may be incomplete, but if the nerve has been completely severed the sensation does not, as a rule, become normal for more than two years. As before mentioned, the time of recovery varies considerably in each patient. The following time intervals have been taken from Head:

Median Nerve.—In eleven cases of suture of this nerve the period between operation and the first return of sensation, which is always protopathic, averaged 84 days, the shortest being 30 days and the longest 220 days. Protopathic complete return averaged 211 days and varied from 158 to 299 days. Epicritic return began in an average of 398 days and varied from 173 to 602 days. Its complete return averaged 438 days and varied from 331 to 695 days.

Ulnar Nerve.—In six cases, protopathic return began in an average of 110 days and varied from 89 to 131 days. It was complete in an average of 240 days and varied from 166 to 425 days. Epicritic return began in an average of 238 days and varied from 166 to 320 days. It was complete in an average of 486 days and varied from 278 to 760 days.

Ulnar and Median Nerves.—In four cases, protopathic return began in an average of 121 days and varied from 74 to 163 days. It was complete in an average of 227 days and varied from 140 to 295 days. Epicritic return began in an average of 293 days and varied from 200 to 358 days. It was complete in an average of 466 days and varied from 273 to 728 days.

From this it can be seen that recovery is a slow process and takes probably much longer than is generally understood. By appreciating the manner in which the return of sensation takes place, we can determine whether recovery is taking place and whether a nerve has been completely divided, and can thereby be better able to advise the patient as to the condition of the nerve and what he can reasonably expect or what should be done.

There are many other phases of this work which time will not permit us to take up, such as incompletely divided nerves, the return of motor function, the electrical reactions and the proper care of the paralyzed member during the time before recovery takes place.

The slow healing of skin injuries and sores in the anesthetic area is probably understood. The nails of the affected hand if kept in a splint do not grow nearly so rapidly as

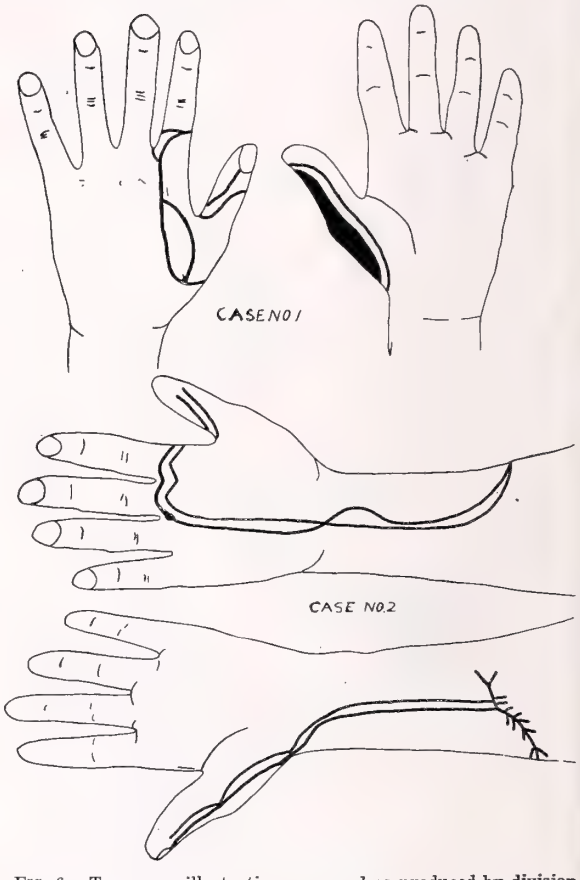

FIG. 6.—Two cases illustrating sensory loss produced by division of the radial and external cutaneous nerves. In case No. 1, the radial nerve was divided just after it passed under the tendon of the supinator longus, and the posterior division of the external cutaneous nerve was divided at the bend of the elbow. In case No. 2, the radial and external cutaneous nerves were divided in the lower third of the forearm, where the jagged scar shows. Note that protopathic and epicritic areas are identical in case No. 2, except for a triangular area on the back of the wrist.

do those of the normal hand. However, if the affected hand is massaged, the difference in growth of the nails is but little.

In closing, attention is called to the sensibility of the hairs, which may be confusing in testing for a return of epicritic sensation. With the return of protopathic sensibility the hairs react to cotton wool, which produces a radiating, unlocalized sensation of a characteristic, tingling quality. If the hairs are shaved off, the area is again insensitive to cotton wool, showing that the hairs them-

selves have a peculiar form of sensation supplied by protopathic fibers.

ABSTRACT OF DISCUSSION.

Dr. James Greenwood, Houston: The author has emphasized the fact that there are three types of sensation carried by nerves. The first is that of deep sensibility, which is carried by the motor nerves, in the subcutaneous and deeper tissues and not in the skin, and by the afferent nerves. It is not carried in the ordinary sensory nerve. As a result, when pressure is applied to the skin with a match or toothpick, for instance, there is sensation, and if we are familiar with the facts brought out by the author, we are likely to conclude that not a great deal of damage has been done, when there may be, instead, very serious injury. In deeper sensibility we can feel pressure, when there is no sensation whatever in the skin.

The second type is protopathic sensation, in which there is the sensation of pain and of heat and cold, when a needle or very hot or cold applications are used. In this type the locality of the pain cannot be very well determined. It is diffused and the patient cannot tell the two-point touch with the compass. A definite touch with some light material, such as cotton wool, is not felt. The protopathic sensibility is not confined to the anatomical distribution of the nerve, but is widespread and overlapping. This type is the first to regenerate, and gives definite information as to the progress of regeneration.

The third type is epicritic sensibility. It is the last to regenerate. It is sensitive to light touch, as with cotton wool, and a pin prick may be localized. The two-point test is positive, and to a minor degree there is sensation to heat and cold.

The practical importance of all of this is that information is given as to the amount of injury to a nerve, that the need of operation may be determined, and the progress of regeneration may be gauged. For instance, if a nerve is severed at the wrist, and we take a match or toothpick and scratch the palm of the hand, and we find a very small area in which there is no sensation, we may conclude there is no material injury to the ulnar narve. However, if we extend our investigations and test out the protopathic sensibility, a much larger area may be found which responds to a pin prick, in an area not corresponding with the anatomical distribution of the nerve, and we may be fooled again. We might advise that there is not much trauma and that sensation will return speedily. If we continue our tests of the epicritic sensibility, using a fine wisp of cotton or Von Frey's hairs and the two points of a compass, or minor degrees of heat and cold, we may be able to determine the true extent of the injury to the nerve. An area may be marked out corresponding exactly to its anatomical distribution.

In repairs to nerves, a record should be kept of sensation, determined at different times, in order that the progress of regeneration may be definitely determined.

Dr. M. L. Graves, Galveston: I want to call attention to the fact that sensory losses may occur years after an original injury has been produced. Sometime ago I had a female school teacher who, when about two or three years old, had a stab wound in the anterior portion of the elbow. She never noticed any trouble until within the last two or three years, when she began to experience sensory and motor disturbances in the hand and forearm along the distribution of the median nerve. Operation revealed the whole median nerve was embraced in a dense infiltrating scar that practically destroyed the function of the nerve beyond that point.

Some time ago I treated a young engineer who had been discharged from the Army because of sensory and motor disturbances in the forearm. I thought at first it was a case of syringomyelia, but the dissociation complex was not complete, and I found the patient had no pulse at the wrist. I immediately thought of a cervical rib. Examination of his neck disclosed one on each side. I had an *x*-ray picture taken, which showed that the cervical rib on the right-hand side came down and attached itself to the clavicle, so that the pressure upon the cervical plexus had produced a symptom complex somewhat like syringomyelia.

I asked Dr. Thompson to remove the cervical rib, which he did, and the patient soon began to improve, and within the course of a year the wrist pulse had entirely returned, and the patient had perfect function of the hand.

Dr. Allison (closing): Hairs have a peculiar sensibility of their own. For instance, a patient may have a lesion, a division of a nerve, and the sensation may be beginning to return. That is protopathic sensation, and in testing out for light touch through the hairs, it will be found that the patient recognizes light touch, and it may be thought that the epicritic sensibility is returning. If the hairs are shaved off the epicritic sensibility will no longer be present. That could be differentiated without shaving off the hairs, by testing with compass points, or intermediate degrees of temperatures.

Now, the most important part of this thing is the length of time required for the regeneration of a nerve and the return of its functions. There seems to be an idea that the return takes place in a month or six weeks, and if it does not so return it is apt to be thought that the nerve was not reunited properly, or that the regeneration will not take place. Head has shown that this return of sensation varies considerably with the individual, and that it extends over a much longer period of time than the average person might think, sometimes one or two years. Protopathic sensibility returns first, and it may be from 30 to 150 or 200 days before it comes back. It may be two or three of 400 days before it is complete. Epicritic return does not begin until protopathic return has been completed. The epicritic return, like the protopathic return, extends over a great many days, running up into the hundreds. Head divided one of the nerves of his own arm to follow out these tests, and five years after there was still some disturbance of sensation in a certain area on the back of the hand. The return is not always complete, because all of the fibers, possibly, do not regenerate, or the ends of the nerve are not in absolute proximity.

A great many times, as in a case I saw recently, a nerve is sutured, but unfortunately the surgeon in doing the suturing does not take care of the scar formation, and does not surround the nerve with something that is going to prevent scars clamping down on the nerve, and instead of finding a nerve returning to function, he is disappointed that it does not return to function; or if it does return, it does so only partially, because scar formation has taken place around the nerve.

Staphylococcus Combined Vaccine.—A staphylococcus vaccine (see New and Nonofficial Remedies, 1923, p. 310) marketed in packages of one 10 Cc. vial, each Cc. containing 1,000 million killed staphylococcus albus and 1,000 million killed staphlococcus aureus. United States Standard Products Co., Woodworth, Wis.

THROMBO-ANGIITIS OBLITERANS, WITH REPORT OF A CASE.*

BY

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GALVESTON, TEXAS.

In 1908, Leo Buerger of New York, made his first contribution to the literature regarding the disease which, largely through his efforts and work, has come to be known as thrombo-angiitis obliterans. There had been, and for that matter still is, a great deal of confusion among pathologists and clinicians as to the true nature of this disease, as well as that of various other vascular diseases. Thus, we are still in doubt as to what constitutes Raynaud's disease, or erythromelalgia, or even endarteritis obliterans. During the past decade and a half, Buerger has done a considerable amount of original work in an attempt to arrive at a more definite and accurate knowledge of the pathology of the disease, thrombo-angiitis obliterans; and the importance of the disease, and the crippling effects which it has on those afflicted with it, make his findings of more than passing interest.

Buerger's work goes to show that this disease is a distinct entity, characterized by very definite pathological lesions, which are not the same as those in endarteritis obliterans or arterio-sclerosis, of whatever origin. Furthermore, by the same token, the disease is clearly differentiated from the so-called vasomotor vascular diseases, *viz.*, Raynaud's disease, erythromelalgia, acrocyanosis, etc., the distinguishing feature of this latter group being an entire absence of anatomical pathology in the vessel wall, so far as is known. That clinicians are prone to overlook this distinction is borne out by the fact that the patient whose history is herewith reported was given a diagnosis of Raynaud's disease by a number of consultants.

The clinical phenomena of the disease thrombo-angiitis obliterans, briefly stated, are as follows: (1) There is a peculiar and wholly unexplained tendency to occur in individuals of the Jewish race from Poland, Galicia and Russia, upwards of 99 per cent of reported cases belonging to this race (recently a considerable number of cases have, however, been reported from Japan, by workers in that country); (2) the disease commences in early adult life, usually from 25 to 35 years; (3) only males are subject to the disease; (4) the onset is insidious, and usually one lower extremity is first involved, pain of increasing intensity being the outstanding feature, with a gradual tendency to vasomotor phenomena, such as coldness and abnormal response to change of position (blushing in the pendant limb, blanching in the elevated limb). Later comes the appearance of various trophic disturbances, such as impaired growth of hair and nails, dry skin, discoloration, ulceration, loss of pulsation in the vessels of the affected area—usually the plantar, dorsalis pedis, popliteal, less commonly the femoral or radial, and the ulnar arteries. The ultimate result is gangrene. Intermittent claudication, combined with very severe pain in the affected limb or limbs, is often seen. The disease is typically, slowly

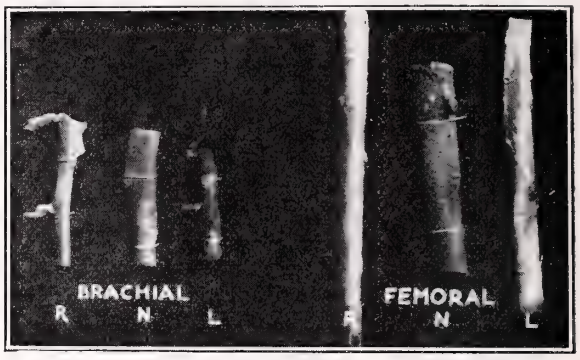

FIG. 1.—Segments of femoral and brachial arteries, mounted with segments from the same region in a normal subject to show relatively small size of the affected vessels. R, right; L, left; N, normal.

progressive, though periods of apparent quiescence may be encountered.

Pain of an excruciating type is an early and ever increasing symptom, and sooner or later becomes intolerable, driving the patient to seek relief at any cost.

Little is known concerning the etiology of the disease. Buerger finds evidence of an infectious origin, but thus far investigation has failed to reveal any definite proof in this direction. It is to be hoped that his researches along this line will bear early fruit, thereby furnishing a definite basis for rational therapy. Willy Meyer of New York, has attempted to show that the nicotine of tobacco smoke, acting as a toxic agent, is the principal etiologic factor. Various other factors have been mentioned, but it is difficult to see how any of them could be expected to act in so specific a manner in one race only. Rather are they to be regarded as predisposing in their action.

As has been mentioned above, the distinguishing feature of this disease lies in the nature of the pathological lesions, which have been shown by Buerger to belong to two rather definite stages, an early or acute stage, and a later or chronic stage. During the acute stage, there is more or less extensive thrombotic occlusion of the involved vessels, veins as well as arteries, in 40 per cent of the cases, with concomitant diffuse leucocytic

infiltration of all the vessel coats. Subsequently, leucocytic infiltration gives way to the formation of "giant cell miliary foci" of irregular distribution, these latter being replaced by fibrous tissue, which is now found throughout the coats of the vessels and

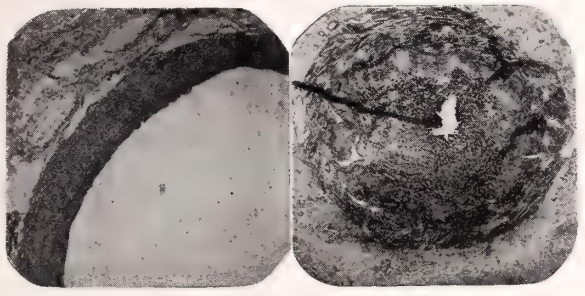

FIG. 2.—Wall of left brachial artery, showing defective internal elastic membrane and absence of thickening of intima.
FIG. 3.—Left posterior tibial artery with fairly recent thrombus.

throughout the thrombus. What is more important, as offering a probable explanation of the intense and constant pain, there is a dense, thick network of fibrous tissue wrapped about neighboring nerves and vessels, binding these firmly together. Later, the fibrous tissue of the thrombus becomes canalized to a varying degree.

The origin of the thrombus has not been explained. It seems clear that the endothelial lining of the vessel, and the intima, as a whole, is involved only secondarily, this being

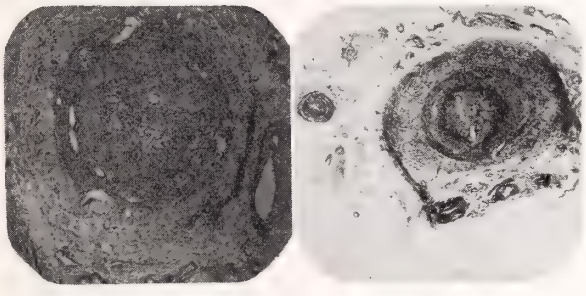

FIG. 4.—Left anterior tibial artery, showing round cell infiltration of adventitia and recent granulations within the lumen.
FIG. 5.—Right radial artery, showing canalization and adventitious vessels in the media. Note the fibrosis and double channel in the accompanying vein.

the main difference between this disease and endarteritis obliterans. A cross section of a vessel in the advanced stage of the former disease will show several lumina, whereas there is only one lumen in endarteritis obliterans. Arteriosclerotic changes are found in only a few cases of thrombo-angiitis obliterans, and then in patients of advanced years of life. Grossly the vessels show marked contraction, often appearing as small fibrous cords, from which a drop of blood may be expressed. Fortunately for the advancement of our knowledge of the pathology of the disease, it has been found that the superficial veins are involved concomitantly with the deeper vessels, making possible the study of the acute stage.

A whole host of therapeutic measures and surgical procedures have been devised and suggested to combat the disease, which is becoming of increasing importance in this country with the continued influx of immigrants of Jewish, Russian and Polish birth. Most of the measures suggested have proven useful in a palliative way only, none being uniformly successful; a result that is rather to be expected so long as we remain in ignorance as to the cause of the disease. No local treatment can be expected to affect the progress of the disease, which is apparently systemic. Patients usually seek medical advice because of the intolerable pain, which is due, in all probability, to the perivascular fibrosis and contraction involving neighboring nerves to a marked degree; and since this is a late stage of the disease, considerable damage has already been done to the various tissues before relief is sought and treatment begun.

Various workers, in this country and in Japan, where the disease seems to be not uncommon, have reported good results in the earlier stages, from the use of sodium citrate solution, intravenously, orally or hypodermatically, in large quantities, to decrease the viscosity of the blood, which is usually somewhat high in these cases. Dry heat, baking, Bier's hyperemic treatment, arterio-venous anastomosis, ligation of the femoral vein, excision of the sympathetic nerves of the involved vessels, injection of absolute alcohol into the nerves of the painful extremities, electric baths, organotherapy, and other measures, have been attempted. Palliative measures often save the affected member for some months or even years, but too often amputation is the only relief in sight, and even this may afford only temporary relief.

The following case history illustrates the disease in a severe form:

Case No. 1.—Male, age 48 years; merchant, Russian Jew, with a history of some seven years duration of the disease. The patient came complaining of gangrene of the toe of the left foot, and extreme pain in this foot and leg. The family history was negative for tuberculosis, syphilis or any vascular disorder. The patient had always been a moderate eater, used no alcoholic beverages, was of a nervous, high strung temperament, and had for years been an inveterate and incessant smoker of cigarettes. About seven years before admission, the patient had suffered a "nervous breakdown," with insomnia, melancholia, loss of appetite and suicidal tendencies, necessitating a lengthy vacation, with subsequent recovery, apparently. Some months after this he noticed the first signs of the disease, which finally brought him to our attention. The index finger of his right hand became sore and swollen, apparently without cause or injury, ultimately becoming gangre-

nous and requiring amputation. About four years later, the thumb of the same hand began to trouble in a somewhat similar manner, becoming sore and painful, with a slight whitish discharge from beneath the nail, with subsequent loss of the nail and some improvement in the finger. In a few months, the

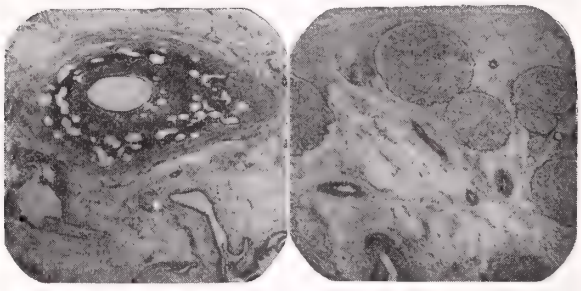

FIG. 6.—Left ulnar artery, showing unusual number of adventitious channels in all arterial coats.
FIG. 7.—Left posterior tibial nerve, showing fibrosis.

ring finger of this hand became involved in a similar manner, the nail being lost. A doctor scraped the bone for him, after which the finger got well. A few months later, the patient noticed the little toe of his right foot was becoming affected in the same manner as the fingers had been. The pain was very severe, gangrene set in and the toe had to be amputated; but the wound refused to heal for several months, gradually forming an indolent ulcer, so that the head of the metatarsal bone now projected and had to be resected. Still the wound would not heal, and the gangrene spread to the neighboring toe, the pain becoming continually more severe, so much so that it was almost impossible to dress the wound. After some months, with the use of the various forms of treatment, the wound gradually and very slowly began to heal.

About five weeks before coming to the hospital, the patient noticed the toes on his left foot becoming very painful, and beginning to swell. The pain and swelling continued to grow worse, more especially in the first, second and fifth toes, the nails becoming loose, with the appearance of a thin, whitish discharge. This was the patient's condition when admitted. He appeared undernourished, irritable, and wore a harassed expression on his face, and seemed to be in constant pain, requiring frequent hypodermics of morphine for relief. Neither radial pulse was palpable, and no sound was audible upon auscultation at either elbow. The fingers of both hands were slightly cyanosed and cool. No pulse could be felt in either foot, but the veins seemed fairly full. Popliteal pulse was not audible. Temporal pulse was palpable at times, but at times it was not. The heart sounds were regular and clear, with no murmur.

The blood Wassermann was negative; blood chemistry was entirely negative; the blood count showed a slight secondary anemia, with normal differential and white leucocyte count, and there was no hyperglycemia.

The *x*-ray revealed a marked absorption of lime salts in all the bones of both feet and ankles, as well as the lower ends of the fibula and tibia.

Within a few days the toes became gangrenous and ulceration set in. The pain was constant and severe, became more and more intense, and amputation was undertaken. No formal amputation was done, merely excision of dead tissue. For a few days the patient seemed to feel somewhat better, and the wound showed no further spread of gangrene. About two weeks later the patient's condition became worse, delirium set in with gradual onset of delusions and attacks of extreme excitement followed by coma, and death in about three weeks after the operation.

Permission could not be obtained for a post-mortem examination, and it is therefore not possible to make a complete report of the pathological conditions, but sections of the main peripheral vessels were obtained, and a number of these are shown with this report.

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EIGHT SUCCESIVE RECOVERIES FROM TETANUS.

BY

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Whatever else one may think, he will agree that eight successive recoveries from tetanus is unusual. Because of this unusual experience, I am prompted to make a brief report of these cases, with their treatment but without any claim whatsoever for originality in the therapeutics of the disease, or even any superior virtue in the line of procedure which was followed. All of these were severe cases of tetanus; four were extremely severe. The patients were all given limited amounts of tetanus antitoxin, usually 30,000 units on the first day of observation and none thereafter, except in one case, which received antitoxin on the second day also. In the first two cases the antitoxin was administered subcutaneously; the third received the antitoxin subcutaneously and intravenously; the last five had 10,000 units of antitoxin administered subcutaneously, 10,000 intravenously and 10,000 intraspinously.

In all of these cases, in addition, from one to two grains of phenol, were administered every four hours, intramuscularly, usually in a 15 per cent watery solution. This was continued until the patient seemed beyond the danger line. Morphine, almost exclusively, was the sedative employed. In every case, except one, there was thorough curettage and cauterization of the portal of entry.

CASE REPORTS.

Case No. 1.—A boy, aged 9, developed tetanus from a wound in his foot, made by a splinter of wood. When first seen, he had trismus and risus and was having frequent convulsions. Improvement began on the third day and was progressive.

Case No. 2.—A man, aged 30, developed tetanus from a wound made by a splinter of wood under a fingernail. He thought he had completely extracted the splinter, but after the tetanus developed quite a large piece was found at the root of the nail. He had marked opisthotonos, trismus, risus and many convulsions. Improvement was slow but progressive.

Case No. 3.—A man, aged 21, developed tetanus five days after a gunshot wound of the hand. He was first seen two days after the development of the

disease. He had trismus, risus and general hypertonicity of the muscles. He had convulsions during the first three days of his treatment; after that his improvement was progressive.

Case No. 4.—A woman, aged 38, a sufferer from extensive pulmonary tuberculosis, was hurled from the top of a loaded moving-van by a telephone wire stretched across the road. She sustained a fracture of the forearm, many contusions and a deep laceration over the right malar bone. When seen six days after the injury, she showed well-marked tetanus, and a paralysis of the right facial nerve. She had a general hypertonicity, trismus and risus, and during her illness had many convulsions. Smears from the wound in the malar region showed large, spore-bearing bacilli—morphologically tetanus. The course of the illness was stormy and prolonged, but eventually recovery was complete.

Case No. 5.—A woman, aged 32, was brought in with typical tetanus of three days' duration. There were trismus, risus and general hypertonia; also many spasms. History of a wound was denied, but after search, a small splinter of wood was found in the sole of the foot; there was no inflammatory reaction surrounding this punctured wound.

Case No. 6.—A woman, aged 36, underwent an operation for the removal of the appendix and gall bladder; there was no drainage. On the twelfth day of a quiet and perfect convalescence, she complained of stiffness of the back, neck and jaws. It was evidently a case of tetanus. Trismus became marked, risus developed, also a hypertonicity of all the muscles; and there were a number of convulsions. A reopening of her wound was considered, but the idea was abandoned. The origin of this infection was undetermined. Many cultures were made of the catgut used in the hospital, with negative results. Theoretically, an unclean hypodermic needle might have introduced the infection. This is the only case in which any antitoxin was given after the first day, or in which a total of more than 30,000 units was given.

Case No. 7.—A boy, aged 8, developed tetanus from a wound made by a splinter in the sole of the foot. His symptoms were classical and well marked; recovery was complete in three weeks. Bacilli, morphologically tetanus, were seen in smears from his wound. His recovery was rapid.

Case No. 8.—A girl, aged 12, was brought in with tetanus of two days' duration, from a punctured wound of the foot. There were trismus, risus and a general muscular hypertonia. She had many convulsions. She left the hospital in two weeks and recovery was complete in a month.

I have omitted a ninth case, concerning which there might be some doubt because of the mildness of the symptoms and their rapid abatement, but which to my own mind was tetanus throttled by early treatment.

MISCELLANEOUS

PRIZES FOR HEALTH POSTERS.

One hundred high school pupils from all parts of the nation will receive cash prizes or honorable mention for their contributions in the cause of better health, according to the terms of an announcement by *Hygeia*, popular health magazine, of a poster contest on health subjects.

Posters submitted in the competition will be used by the Bureau of Health and Public Instruction of the American Medical Association in its work of spreading modern teachings of healthful living to the general public.

Surgeon General Hugh S. Cumming of the U. S. Public Health Service, John T. McCutcheon, cartoonist of the *Chicago Tribune*, and President William B. Owen of the Chicago Normal College, former president of the National Education Association, will pass upon the merit of the posters.

To interest school pupils in health and its attainment and to extend health propaganda are the two purposes given by the magazine in its March issue containing the contest announcement.

Forty-eight prizes ranging from $100 to $1 will be given individual students for the best health posters. An award of $75 also will be given the high school, the pupils of which submit the best group of posters, number and quality both being considered.

Fifty praiseworthy posters not in the prize-winning class, will be given honorable mention.

Complete details of the contest are given in the current issue of *Hygeia*, a copy of which will be mailed on request.

THE IMPORTANCE OF THE PATIENT'S POSITION IN STUDYING LUNG EXCURSION.

To study the respiratory excursion of the anterior inferior or lateral aspects of the thorax, C. F. Hoover, Cleveland (*Journal A. M A.*, Nov. 10, 1923), says the patient should lie on his back. The upright position should be assumed only to show the excursion of the posterior aspects of the thorax. If the examiner wishes to study respiratory movements of the costal borders for the purpose of gaining some conception of the contour of the median and lateral parts of the arch of the diaphragm, then it is still more obvious that all interference from the abdominal muscles should be avoided by having the patient lie on his back with the abdominal muscles relaxed; for there is exhibited in the costal border movement a very accurate index of the balance of power between diaphragm and intercostals. The costal margin is composed of the ends of the ribs with their connecting cartilages; so each costal segment of the borders portrays the movement of the end of its respective rib. The force, extent and direction in which each segment moves reveal with remarkable accuracy any alteration in the balance of power between the intercostal muscles and that part of the diaphragm attached to the end of the ribs in question.

TREATMENT OF SYPHILIS AMONG THE INSANE.

The author, Dr. Thomas B. Christian, gives a thorough review of the method of treatment of syphilis among the insane at the state hospital at Morris Plains, New Jersey, citing a number of cases. Although many cases coming to this hospital are recognized too late for curative treatment, they are treated to check onward progress of the disease. He believes that if more examinations of the spinal fluid were made in general hospitals and private practice, many cases would probably never reach institutions for the insane. The activity of a syphilitic process in the central nervous system is shown earlier, more accurately, and a number of times only by pathological changes in the spinal fluid, and the activity of syphilis of the nervous system is indicated by the globulin test, cell count, Wassermann and colloidal gold reactions, long before mental symptoms or physical signs are present. Spinal fluid examinations would discover many slow progressing cases of neurosyphilis, and should be used more frequently. In summarizing, the author says in part:

"Our results obtained from treating the syphilitic insane have more than compensated for the time

and expense, and it is our plan to continue treatments.

"It is a matter of individual opinion whether cases of general paralysis confined in institutions for the insane should or should not be treated. We have found no results obtained in such cases.

"Every case in or out of an institution should have a spinal fluid examination if the blood is positive.

"Among 1,500 cases examined for syphilis 12.5 per cent showed positive Wassermanns, and from this number of positive cases 26.2 per cent showed signs of neurosyphilis: 17.6 per cent being cases of general paralysis and 8.6 per cent, other forms of neurosyphilis. It is to be remembered that the above examinations show the results from latent syphilis, as no case recorded in the above shows clinical signs of syphilis excepting the cases of paresis, and they, of course, belong in the tertiary stage as neurosyphilis."—*Am Jour. Med. Scs.*, October, 1922.

THE CODEINE PILL.

When you're sick with the flu, and you've had a hard chill,
The good Doc, in his mercy, will give you a pill:
When lo, you are wafted to Egyptian shores,
In golden gondolas with bright silver oars.

As you glide down the Nile o'er its waters so calm—
Emerald-carpeted banks, and majestical palms—
Your bark nears the shore, and you turn to the right;
Such brilliance and grandeur that dazzle your sight!

'Tis the court of Cleopatra, of such regal splendor—
(Marcus Anthony, thou wast no miserly spender!)
She reclined on a couch all encrusted with gold;
And not half of her beauty has ever been told.

Over there to the left, stood old Julius Caesar,
A-eyeing Cleo, and just aching to squeeze her;
While dark, turbaned slaves with scented reed fans,
Obeyed all the whims of this much-talked-of man.

How lovely it was in that Land of the Nile,
(And if you're just married, such hours to beguile!)
Where the zephyrs are soft, and the skies always blue,
And the birds, envying you, everywhere bill and coo.

But, *bang!* It's all over and you're back in bed,
A bitter taste in your mouth, and a pain in your head.
You send for the Doctor, and ask if he will
For goodness sake give you one more Codeine Pill.

—*Mrs. A. W. Montague.*

Fort Worth, Texas, Feb. 10, 1924.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Patch's Flavored Cod Liver Oil.—Cod liver oil containing 0.5 per cent. of essential oils as flavoring, and having a vitamin potency so that 0.002 Gm. per day is adequate to promote the growth of young albino rats. For discussion of the actions and uses of cod liver oil, see Useful Drugs. The dose is not more than 4 Cc. (1 fluidrachm) 3 times a day. For children not more than 2 Cc. (30 minims) three times a day. E. L. Patch Co., Boston.

Vitalait Culture Bacillus Acidophilus.—A pure culture of B. acidophilus in vials each containing about 7 Cc. It contains not less than three hundred millions of viable organisms (B. acidophilus) per cubic centimeter at the time of sale. For a discussion of the actions and uses of cultures of B. acidophilus, see Lactic Acid-Producing Organisms and Preparations, *Journal A. M. A.*, Sept. 8, 1923, p. 831. The usual dosage is the contents of one vial diluted with water and followed by a quantity of sugar of milk. The culture is distributed by the manufacturer only and is sent by mail. The Vitalait Laboratory of California, Pasadena, Calif.—*Jour. A. M. A.*, March 1, 1924.

Apothesine.—Diethyl-amino-propyl cinnamate-hydrochloride. Apothesine is a local anesthetic of the procaine rather than the cocaine type, that is, it belongs to that type which, while effective for injection anesthesia (especially when combined with epinephrine), is relatively inefficient topically. It is slower in action than procaine. Its absolute toxicity is less than that of cocaine, but about twice that of procaine. It is employed for infiltration injection, nerve blocking, intraspinal injection, pressure anesthesia, oral administration as a palliative measure, for postoperative and persistent vomiting, and pain of gastric ulcer. As a local anesthetic, apothesine is used in 0.5 to 2 per cent. solution, generally with epinephrine and sterile water or physiological solution of sodium chloride. Apothesine is marketed in substance and also in the following forms: apothesine solution 1.5 per cent.; apothesine hypodermic tablets 0.08 Gm.; apothesine and adrenalin hypodermic tablets (apothesine 0.04 Gm.; adrenalin 0.00004 Gm.); apothesine and adrenalin hypodermic tablets (apothesine 0.3 Gm.; adrenalin 0.0003 Gm.; apothesine and adrenalin hypodermic tablets cylindrical (apothesine 0.01 Gm.; adrenalin 0.000025 Gm.); apothesine ointment (apothesine 10 per cent.; adrenalin 1:60,000!; and menthol 0.5 per cent.). Parke, Davis and Co., Detroit.—*Jour. A. M. A.*, March 8, 1924.

Normal Horse Serum.—A normal horse serum (see New and Nonofficial Remedies, 1923, p. 281) marketed in packages of one syringe containing 10 Cc.; also in packages of one syringe containing 20 Cc. United States Standard Products Co., Woodworth, Wis.—*Jour. A. M. A.*, March 15, 1924.

Acne Vaccine.—An acne vaccine (see New and Nonofficial Remedies, 1923, p. 302) marketed in packages of one 10 Cc. vials, each Cc. containing 40 million killed bacteria. United States Standard Products Co., Woodworth, Wis.

Gonococcus Vaccine.—A gonococcus vaccine (see New and Nonofficial Remedies, 1923, p. 304) marketed in packages of one 10 Cc. vial, each Cc. containing 1,000 million killed gonococci. United States Standard Products Co., Woodworth, Wis.

Pertussis (Whooping Cough) Vaccine.—A pertussis bacillus vaccine (see New and Nonofficial Remedies, 1923, p. 306) marketed in packages of one 10 Cc. vial, each Cc. containing 3,000 million killed pertussis bacilli. United Standard Products Co., Woodworth, Wis.

Typhoid Vaccine.—A typhoid vaccine (see New and Nonofficial Remedies, 1923, p. 314 marketed in packages of three 1 Cc. vials, containing 500 million, 1,000 million and 1,000 million killed typhoid bacteria, respectively. United States Standard Products Company, Woodworth, Wis.

Typhoid Paratyphoid Vaccine Combined.— A typhoid vaccine (see New and Nonofficial Remedies, 1923, p. 314) marketed in packages of three 1 Cc. vials, the first dose containing 500 million killed typhoid bacteria, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacteria, the second and third doses each containing 1,000 million killed typhoid bacteria, 750 million killed paratyphoid A bacteria and 750 million killed paratyphoid B bacteria. United States Standard Products Co., Woodworth, Wis.—*Jour. A. M A.*, March 22, 1924.

Streptococcus Vaccine.—A streptococcus vaccine (see New and Nonofficial Remedies, 1923, p. 312) marketed in packages of one 10 Cc. vial, each Cc.

containing 400 million killed streptococci. United States Standard Products Co., Woodworth, Wis.

Acne Vaccine Combined.—A mixed bacterial vaccine (see New and Nonofficial Remedies, 1923, p. 318) marketed in packages containing one 10 Cc. vial, each Cc. containing 40 million killed acne bacilli and 1,000 million killed staphylococcus albus. United States Standard Products Co., Woodworth, Wis.

Diphtheria Toxin-Antitoxin Mixture, O. 1L.†—A diphtheria toxin-antitoxin mixture (see New and Nonofficial Remedies, 1923, p. 284) each Cc. constituting a single dose and marketed in packages of 3 vials, each containing 1 Cc.; in packages of 30 vials, each containing 1 Cc. and in packages of one vial containing 30 Cc. United States Standard Products Co., Woodworth, Wis.

Diphtheria Toxin for Schick Test and Control.—A diphtheria immunity test (see New and Nonofficial Remedies, 1923 p. 323) marketed in packages containing a vial with undiluted diphtheria toxin and physiological solution of sodium chloride for dilution. As a means of control there is also supplied diphtheria toxin which has been heated to destroy the exotoxins. The product is marketed in packages containing an amount sufficient for fifty tests; also in packages containing an amount sufficient for one hundred tests, but the strength of the toxin is such that the dose is 0.1 Cc. United States Standard Products, Woodworth, Wis.

Tetanus Antitoxin.—A concentrated tetanus antitoxin (see New and Nonofficial Remedies, 1923, p. 284) prepared according to the Banzhaf method. Marketed in syringes containing 1,500, 5,000 and 10,000 units. United States Standard Products Co., Woodworth, Wis.—*Jour. A. M. A.*, March 29, 1924.

NEWS

Doctors' Offices Destroyed by Fire which occurred at Colorado, Texas, on March 29, resulting in a property loss estimated at over $100,000. The offices of Drs. C. M. McMillan and T. J. Ratliff, were completely destroyed, and as they carried no insurance, they sustained a heavy loss.

Renewal of the Bureau's contract for the use of the American Legion Memorial Sanatorium at Kerrville, built by the State of Texas, was announced by Gen. Frank T. Hines, director of the Veterans' Bureau, Washington. The new lease will begin July 1, 1924, and the annual rental is $67,500.

The National Board of Medical Examiners announces examinations as follows: Part I, June 19, 20 and 21; Part II, June 20 and 21, 1924. All applications for examination must be made on or before May 15. All communications should be addressed to Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

Dr. W. S. Carter, formerly Dean of the Medical Department of the University of Texas, at Galveston, but at the present time connected with the Rockefeller Foundation, and until recently on duty with a medical college in the Philippine Islands, is, with Mrs. Carter, on his way to New York. They left Manilla, March 1st, and are returning by way of Hongkong, Singapore, Java, Australia, New Zealand, South Africa, London and Paris. Dr. and Mrs. Carter will arrive in New York City during September, 1924, and will be there until June, 1925. Letters addressed to 61 Broadway, New York, care Rockefeller Foundation, will eventually reach Dr. Carter.

Mrs. Martha Virginia Harrison, 88 years old, widow of Dr. R. H. Harrison, who was a surgeon in the Confederate Army and later president of the Texas Medical Association and chief surgeon for the Southern Pacific Railway, died March 28, at the home of her daughter, Mrs. T. J. Windham, at Dallas. She had lived here for ten years and had been a resident of Texas fifty-five years.

Mrs. Harrison is survived by three daughters, Mrs. Windham, Mrs. Wilson L. Littlefield of Dallas, and Mrs. T. R. Knox of Uvalde; two sons, Dr. R. H. Harrison and Dr. J. W. Harrison, both of Houston. The body will be sent to Columbus for burial.

Public Health Summer Schools, conducted with the co-operation of the U. S. Public Health Service, will be held at the University of Iowa, June 9-July 18; at the University of California, June 23-August 2; at the University of Michigan, June 23-August 2, and at Columbia University, July 7-August 15.

These Summer Schools, extending over a period of from six to eight weeks, at the above named institutions, will cover a wide range of subjects. Laboratories will be available and clinical materials will be used for demonstration, so as to make the work highly practical. Tuition fees will range from $25 to $54, depending upon the University and the number of courses selected. The faculties of these summer schools will include many leading specialists of the United States, and the widespread interest manifested thus early indicates that a large number of physicians and sanitarians will take advantage of this opportunity.

A Superintendent for the Auxiliary Insane asylum to be established in Austin by remodeling the buildings of the former State Blind Institute, will be selected at once, by the State Board of Control. These buildings were improved and enlarged materially during the war for the school of military aeronautics. This decision followed an intimation by the Travis County District Court that the citizens seeking the injunction to restrain the use of the buildings for asylum purposes have no grounds for their petition. The court said before an injunction lies it must be proven that a nuisance exists or that one might occur.

Under this statement of the court, the board will proceed with preparations to convert the buildings, having an appropriation of $60,000 for that purpose. The architect has advised that the money will remodel only three of the larger buildings and take care of 200 patients. About 200 more are to be cared for at the Rusk Asylum. It is planned to empty the jails of 300 insane now in them. All asylums are full.—*Dallas News.*

The Samuel D. Gross Prize of $1,500 will be awarded to the writer of the best original essay not exceeding 150 printed pages, octavo in length, illustrative of some principle in Surgical Pathology or Surgical Practice, founded upon original investigation. Essays will be received in competition until January 1, 1925. The successful competitor must publish his essay in book form and deposit one copy in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and the title page of this book must bear the statement that the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery. These essays must be written by American citizens and each essay must be written by a single author in the English language, and sent to the Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 South 22nd St., Philadelphia, Pa. Each essay must be typewritten, distinguished by a motto and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. All unsuccessful essays will be returned if reclaimed by their respective writers or their agents within one year. No award will be made if the essays submitted are not considered worthy of the prize.

SOCIETY NEWS

Bexar County Medical Society met March 13, with 35 members and 2 visitors present.

Dr. Lucius D. Hill read a paper on "Breast Feeding," in which he made a plea that doctors should realize the great responsibility that rests upon anyone who takes the baby from the breast and substitutes artificial feeding. He quoted statistics which showed that a breast-fed baby had six times the chance of survival during the first year of life that an artifically-fed baby had. This paper was discussed by Drs. P. I. Nixon, Wm. E. Luter, Irving T. Cutter, S. R. Kaliski and W. S. Hanson.

In closing, Dr. Hill explained that Sedgwick's method of expulsion of milk consisted in grasping the breast with the thumb and the index fingers, the other three fingers supporting the breast. Pressure is first made inward and then a stripping movement is made outward. He stated that he thought a complete emptying of the breast at regular intervals was the most important thing, next to a suitable diet for the mother. The baby may leave enough milk in the breast to interfere with the demand for the secretion of milk. He stated that Borden's Eagle Brand milk contained only .85 per cent. fat and .75 per cent. protein, and hence there was a great deficiency of both of these necessary elements in this form of artificial feeding, as well as a lack of vitamins. Consequently, such babies constantly fed on Eagle Brand milk often show signs of rickets and faulty dentition.

Dr. E. M. Sykes read a paper on "Acute Middle Ear Infections in Infants and Children," in which he explained the difference in anatomy of the eustachian tube in the child and in the adult. He stated that this was one of the reasons why the former are more apt to suffer from middle ear infections, and made a plea for early oral examination in all diseases of childhood, as only in this way could many cases of impaired hearing, and many mastoid cases, be averted. This paper was discussed by Drs. O. H. Judkins, J. H. Burleson, L. K. Beck, Lucius Hill and S. R. Kaliski.

Bowie County Medical Society met March 20, with the following members and visitors in attendance: Drs. Mann, Laws, Collom, Middleton, Lennard, Hays, Hibbitts, Lee, Hunt, Lanier, Seeger, J. K. Smith, J. T. Robinson and Mrs. A. J. Kizer, Misses Aleene Warren and Lena Owen.

Dr. Wm. Hibbitts read a paper on "The Relation of the Doctor to the City Health Officer," in which he outlined the problems with which both the practitioner and the public health official must contend, and stated that better co-operation was expected in the reporting and quarantining of communicable diseases.

Mrs. A. J. Kiser talked on the activities of the American Red Cross, both nationally and locally.

Miss Aleene Warren, public health nurse, spoke on the public health needs of Bowie and Miller counties. She referred to the necessity of educating the youth in preventive medicine, through the school teachers. She stressed the need for better quarantine laws, and for a more thorough enforcement of the present laws in Texarkana and the surrounding locality.

Dr. Geo. A. Hays announced that a sanitary health survey of Texarkana would be made in the near future, and that the data so collected in the survey would be tabulated and placed before several state and national public health agencies, with the request for advice concerning the needs of Texarkana, as indicated by the survey.

Bowie County Medical Society invited the doctors of Miller county to meet with the society March 29, at which time a banquet was given in honor of Dr. Wm. Rankin, State Health Officer of South Carolina, and a very profitable and enjoyable evening was spent.

Brown County Medical Society met at Brownwood, March 11, with the following members in attendance: Drs. W. B. Anderson, M. L. Brown, Joe E. Dildy, Jewel Daughety, C. C. Bullard, B. A. Fowler, W. H. Paige, O. N. Mayo, J. W. Tottenham, B. M. Shelton and Ned Snyder.

Dr. R. P. O'Bannon of Fort Worth, read an interesting paper on the "Use of Radium in Benign Tumors of the Uterus."

Dr. Ned Snyder of Brownwood, read a paper on "Specific Urethritis and Its Complications."

Both papers were freely discussed.

Cameron County Medical Society met March 27, 1924, with 20 members and 12 visitors present.

Mrs. Malone Duggan, on invitation, addressed the society on the subject of medical society auxiliaries.

Dr. G. E. White of San Juan, Hidalgo county, presented a case of a baby with a skin disease involving the face. The case was discussed by Drs. I. L. McGlasson, G. R. Yantis and W. J. Vinsant.

Dr. White also presented the case of a young man with a chronic involvement of the deep tissues beneath the left maxillary bone. This case was discussed by Drs. G. R. Yantis, J. S. Webb, Burton Thorning, and others.

Dr. I. L. McGlasson read a paper on "Malignancies of the Skin and Their Treatment," which was discussed by Drs. Burton Thorning, J. S. Webb and C. P. Yeager.

Dr. C. P. Yeager of Kingsville, read a paper on "Some Interesting Obstetrical Observations," which was discussed by Drs. W. J. Vinsant, G. R. Yantis, John Hunter, H. K. Loew and Capt. Williams, U. S. A.

Dr. C. D. Steinwinder read a paper on "Cardiovascular Complications in Obesity," in which he stressed the work performed by the heart in a fat person, because of the many more miles of capillary tissue through which the blood had to be pumped. The paper was discussed by Dr. Dudley Jackson.

Dr. Dudley Jackson read a paper on "Combined Methods of Treating Malignancies," which was discussed by Drs. W. O. Brown and I. L. McGlasson.

Dr. Burton Thorning then spoke in behalf of the publicity and educational campaign, and letters were read from the State Secretary and from the State President urging the prompt collection of funds for this purpose. A motion was passed by the society to the effect that each member be requested to contribute the sum of $10.00 to the publicity and educational campaign fund.

Dallas County Medical Society met March 27, in the Auditorium of the Medical Arts Building, with 63 members present.

Dr. Martin E. Taber reported the case of a child with a watermelon seed in its lung, around which foreign body a small abscess had formed. He also reported the case of a child in whose lung a tack had remained for three years. At the time of the removal of the tack, about a pint and half of pure pus was taken from the lung.

The following papers were read: "Cancer of the Rectum and Recto-Sigmoid," by Dr. Curtice Rosser—discussed by Dr. L. C. Ellis; "Value of X-Ray in Obstetrics," by Drs. Davis Spangler and J. W. Bourland—discussed by Dr. C. R. Hannah; "Neuro-Retinitis, With Case Report," by Dr. W. Mood Knowles—discussed by Dr. M. E. Taber, and "Chronic Cholecystitis: Its Etiology, Diagnosis and Treatment," by Dr.

Geo. M. Underwood—discussed by Drs. Tate Miller, S. D. Weaver and C. W. Flynn.

Lubbock-Crosby County Medical Society met April 8, with 13 members and Dr. R. S. Killough, councilor for the Third District, present.

Dr. H. F. Miller of Slaton, read a paper on "Spina Bifida," which was discussed by Drs. C. J. Wagner and T. G. Bates.

Dr. Wm. L. Baugh read a paper on "Post Natal Care," in which he stressed the importance of examining the patient carefully after delivery, and of repairing all lacerations promptly. He stated that by so doing 70 per cent of the lacerated cervices would be healed. Postpartem hemorrhages are due to too rapid delivery and after-pains should be controlled with opiates.

Dr. Killough addressed the society on the subject of "Education of the Public Along Medical Lines." He stated that in order to conduct a worth while educational campaign, the doctors must raise adequate funds. He urged that donations for this purpose be both prompt and liberal, in order that the anticipated campaign of the State Medical Association might be carried out as planned.

Matagorda County Medical Society met at Bay City, March 28, at which time the following officers were elected for the ensuing year: President, Dr. A. S. Morton, Bay City; Vice-President, Dr. H. H. Loos, Bay City; Secretary, Dr. J. E. Simmons, Bay City; delegate, Dr. A. S. Morton; alternate, Dr. J. E. Simons.

Tarrant County Medical Society met March 18, with 40 members present.

Dr. C. S. Woodward read a paper on "A Plea for Skin Graft," which was discussed by Drs. C. O. Harper, E. P. Hall, R. H. Gough, G. V. Morton, E. H. Bursey and D. R. Venable.

Dr. E. P. Hall reported the case of a woman 25 years of age, upon whom an appendectomy had been performed. Ten days following the operation the patient began to have afternoon elevation temperature. Twelve cc. of a 1 per cent solution of mercurochrome was given intravenously, causing a severe reaction, with a temperature of 104° F., vomiting, diarrhea and general discomfort. The temperature was normal 16 hours afterward, and the leucocyte count was reduced from 12,000 to 5,200. The patient has had no further fever. The use of mercurochrome was discussed by Drs. W. G. Cook, W. L. Allison, R. S. Mallard, E. H. Bursey and G. V. Morton.

Dr. Hall reported the case of a girl 14 years of age who was operated upon because of pain in the right iliac region, vomiting and slight elevation of temperature. The right tube and ovary were twisted and the tissues engorged with blood. It was his impression that the hemorrhage had preceded the twisting of the ovary on its pedicle, resulting in strangulation. The case was discussed by Drs. J. H. McLean, C. H. McCollum and C. O. Harper.

Dr. L. O. Woodward was elected to membership.

Tarrant County Medical Society met April 1, with 90 members present.

Mr. Beck was given the privilege of the floor and spoke to the society concerning membership in the Fort Worth Chamber of Commerce. A motion was adopted endorsing the Chamber of Commerce, and urging the members of the society to become members of that organization. Addresses were made by Drs. Wilmer L. Allison, W. R. Thompson, W. G. Cook, E. P. Hall and I. C. Chase, commending the work done by the Chamber of Commerce.

Dr. W. S. Horn presented the case of a man, 38 years of age, who had an acute attack of amoebic dysentery. The patient was treated with emetin, hypodermatically, and coal-oil enemas were recommended. The patient was not seen by Dr. Horn for some time, and when he was seen he was suffering from coal-oil poisoning. He gave a history of being unable to expel the coal-oil enemas, and within a week from the time this condition was noted, he began to suffer from extreme weakness, numbness and a tingling sensation over the body. He also had difficulty in defecation and micturition. The scent of coal-oil was on his breath and everything he ate tasted like coal-oil. He was confined to his bed and unable to walk for two weeks. His pulse was 60, temperature 97° F., blood Wasserman negative, and urinalysis negative. Gradual improvement has followed, but he still has to walk with a cane. No case of coil-oil poisoning could be found reported in the literature.

The society went into executive session for the purpose of considering a report of the Board of Censors, following which a member of the society was suspended for six months, for alleged violation of the rules of ethics of the society, pertaining to lay advertising.

Tarrant County Medical Society met April 8, with 35 members present.

Dr. H. L. Warwick read a paper entitled "X-Ray in the Treatment of Impaired Hearing; Preliminary Report." The paper was discussed by Drs. Tom Bond, W. L. Allison, W. R. Thompson, J. J. Richardson, M. L. Gilmore and R. W. Moore.

Dr. W. L. Allison read a paper entitled "Intracranial Hemorrhage in the New-Born," which was discussed by Dr. Will Horn.

Dr. Will Horn read a paper written by Dr. W. O. Ott, entitled, "Intracranial Complications Following Ear and Nose Infections."

Dr. K. H. Beall read a paper entitled, "Mysticism and Fatalism in the Treatment of Heart Disease," which was discussed by Drs. E. P. Hall, D. R. Venable and I. L. Van Zandt.

Dr. J. T. Shytles was received by transfer, from the Johnson County Medical Society.

Van Zandt County Medical Society met April 4, with 8 members present, at which time the following papers were read and discussed: "Importance of Early Diagnosis in Pulmonary Tuberculosis," Dr. W. C. Herrin, Canton; "Enuresis in Childhood and Adolescence," Dr. D. Leon Sanders, Wills Point.

Northeast Texas District Medical Society met at Clarksville, April 8.

Dr. E. M. Watts of Texarkana, read a paper on "The Treatment of Eclampsia," in which he dwelt upon instructions that should be given pregnant women as to proper diet and so forth, during pregnancy, and the dangers of pregnancy.

Dr. Preston Hunt of Texarkana, read a paper on "When Should Cesarean Section Be Done?" He gave the indications for cesarean section and stated that under favorable conditions only 2 per cent mortality should be expected in this operation. In the discussion, the opinion seemed to be prevalent that many cesarean sections could be avoided by proper treatment.

Dr. E. O. Rushing of Dallas, read a paper on "Diagnosis and Lantern Slide Demonstrations of Goiter" Dr. Rushing described the technique used in Crile's Clinic.

Dr. George Hays of Texarkana, read a paper on "Clinical Urinalysis."

Dr. R. H. T. Mann of Texarkana, read a paper on "Suspension Laryngoscopy," in which he brought out the advantages of direct laryngoscopy over indirect laryngoscopy. This paper was discussed by Dr. T. E. Fuller, who stated that a new laryngoscope had been devised in Vienna, which he thought was an

improvement over the Killian instrument. Dr. V. R. Hurst stated that he considered that Dr. Mann was doing "a specialty within a specialty," and that all specialists could not afford to equip themselves with the necessary instruments and acquire the technique for this class of work.

Dr. J. N. White of Texarkana, read a paper entitled "Report of a Case," in which he reported a very interesting case in which no diagnosis had been made.

Dr. A. E. Chase of Texarkana, read a paper on "Post Operative Hernia," in which he stated that the chief cause of this condition is infection. He described the usual operations for correction.

Mr. Ed Hopkins, Sanitary Engineer of the Red River County Health Unit, made an important talk on the part the Sanitary Engineer plays in health units. He stated that proper sanitation depends largely on the efforts of the physicians practicing in a community.

A resolution was passed endorsing the health movement instituted by the Red River County Medical Society, and commending its members for their progressive spirit, this being one of the few counties in East Texas to take advantage of this important movement in the protection of the health of its people.

The society decided to issue a bimonthly bulletin, to be known as the *Northeast Texas Society Bulletin.* Drs. V. R. Hurst, Wm. Hibbitts and J. K. Smith, were appointed as a committee to manage and edit the publication.

The next meeting will take place at Texarkana, October 14.

CHANGES OF ADDRESS.

Dr. A. M. Letzerich, from Corpus Christi to Yorktown.
Dr. Harvey Kinard, from El Paso to Amarillo.
Dr. C. P. Lynch, from Chilficothe to Pendleton.
Dr. Henry Romines, from Kemp to Brownwood.
Dr. W. W. Lowrey, from Leroy to Hillsboro.
Dr. John B. Morgan, from Taft to Robstown.
Dr. Frank Harrison, from Dallas to New York City, N. Y.
Dr. H. N. Lusk, from Pecos to Ralls.
Dr. T. B. Askew, from San Antonio to Los Angeles, California.
Dr. Z. B. Bobo, from Fort Worth to Rhome.
Dr. H. E. Leuhrs, from San Benito to Tamina.
Dr. J. H. Carraway, from Sadler to Brookston.

DEATHS

Dr. Hugh D. Barnes of Arlington, Texas, died in a Fort Worth sanitarium, March 11, 1924. He had been in poor health for quite a while, for which reason he had retired from practice.

Dr. Barnes was born in Hodginsville, Kentucky, January 13, 1886. He received his preliminary education in the public schools and attended Carlton College from 1880 to 1885. He was for eleven years connected with the T. & P. Railroad, being a locomotive engineer at the termination of his service. He attended the Louisville Medical College two years, and began practicing at Tulia in 1882. He later attended the Medical Department of the Fort Worth University, receiving his M. D. degree from that institution in 1902. After graduating, he resumed practice at Tulia, removing to Childress in 1911, where he practiced until 1920, at which time he had to give up his practice on account of bad health. He moved to Arlington in 1922, where he passed his last years in raising thoroughbred poultry. He organized White Leghorn clubs in Tarrant county, and was National Secretary-Treasurer of the Single Comb White Leghorn Club, for a number of years. He owned the Arlington Journal, which he used largely in the interest of fine poultry breeding.

Dr. Barnes was married at Fort Worth, Texas, to Miss Linnie Moss, who preceded him in death, on May 23, 1921. He is survived by five children, Mrs. W. H. Gilliam, H. Roy, Clyde, Charles and Hugh D. Barnes, Jr., and one sister, Mrs. S. T. Ross, and his nephew and former professional associate, Dr. R. B. Wolford of Wichita Falls.

Dr. Barnes was a member of the Baptist Church, an Elk, a K. P., a Woodman of the World and a member of the Brotherhood of Locomotive Engineers. He was for many years an active and valuable member of his county medical society and the State Medical Association, of which latter he was Vice-President in 1908, and councilor of the Third District in 1913. He has served on several important committees, and in 1918 was elected Delegate to the American Medical Association. His passing is a distinct loss to the profession. He is mourned not only by his family but by a large number of devoted friends.

DR. HUGH D. BARNES.

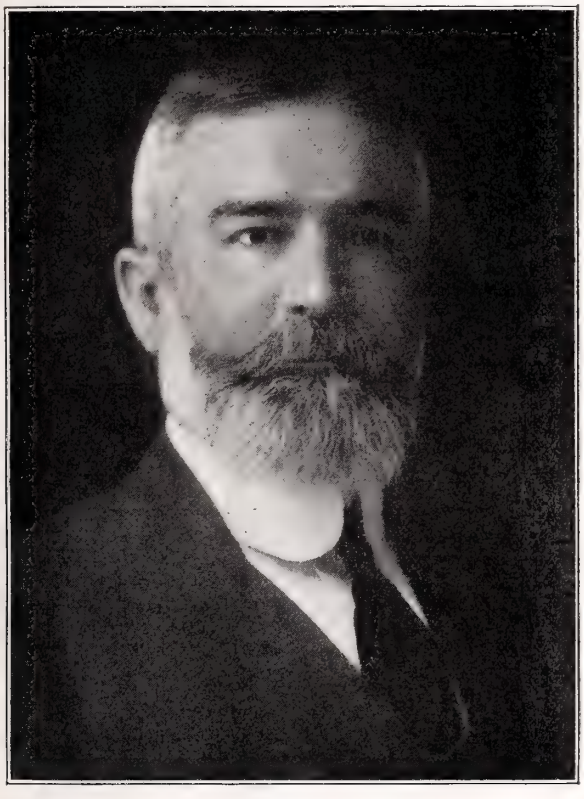
Dr. George H. Lee of Galveston, died at his home March 21, 1924, of edema of the lungs due to cardiac valvular insufficiency.

Dr. Lee was born at Austin, Texas, December 1, 1862. His father moved to Texas in 1845, to assume a professorship in the Bastrop Military Institute, which position he relinquished in 1867, removing to Galveston, where he lived until his death, in 1908. He was a member of a large cotton brokerage firm at that place.

Dr. Lee was three years of age when his family moved to Galveston. He received his early schooling in that city, but took his literary degree from Southwestern University, in Georgetown, Texas, and the

University of Mississippi, from which latter institution he graduated in 1882. He received the degree of M. D. from Tulane University in 1888, being the valedictorian of his class.

Dr. Lee entered the practice of medicine in Galveston, and attained an unusual degree of success from the beginning. He became connected with the Medical college at that place later the Medical Department of the University of Texas, in 1891, being successively Demonstrator of Anatomy, Assistant in Pathology, Lecturer and later Professor of Dermatology, assuming the Chair of Obstetrics and Gynecology in 1909, which position he held until his death. He was gynecologist and obstetrician to John Sealy Hospital, and Visiting Surgeon to St. Mary's Infirmary.



DR. GEORGE H. LEE.

Dr. Lee was married to Miss Daisy B. Townsend, in 1892. There were four children, Daisy Emma, George Townsend, Cora Alice and Mary Ashley, all of whom, with their mother survive him. He is also survived by two brothers, Tom J. of Tampico, Mexico, and Chas. K. of Fort Worth.

Dr. Lee was an active member of his county medical society, a Fellow of the American Medical Association and of the American College of Surgeons. He has been a valued contributor to the literature of scientific medicine, and has been honored and has served well, the numerous medical societies to which he has belonged. At the time of his death he was president of the South Texas District Medical Society, and he had served as president of his county medical society. He was an enthusiastic member of the Alpha Mu Pi Omega Fraternity, of which organization he had served as president.

Dr. Lee was a distinguished citizen, a courtly gentleman and a man of strong convictions. He will be missed by his fellows in the medical profession and his many friends among the laity. The following is from a tribute paid to him by a fellow physician:

"He was to me a man among men. Although Dr. Lee was an eminent surgeon, I shall not attempt to sketch his career to you to whom it is well known. He was a wonderful physician. In the sickroom he was a close, careful student of his cases, acquired almost immediately a comprehensive grasp of the situation and then laid down a plan of procedure to which the patient, nurses and attendants all had to adhere. This included himself, for he gave himself up for his patients.

"The poorest in the wards received as much personally from our Dr. Lee as did the wealthiest of his clientele in the private rooms, and I am absolutely sure that his personal devotion to duty shortened his life many years.

This discipline had much to do with his success as a healer of mankind and was a training of the most magnificient kind for those working under him."

Dr. Leonard Keplinger of Waxahachie, died at his home, March 16, 1924, following a brief illness.

Dr. Keplinger was born at Owensboro, Kentucky, in October, 1864, and secured his early education in the schools of that community. He received his degree in medicine from the Tulane University School of Medicine, New Orleans, in 1895, specializing in eye, ear, nose and throat work, and immediately thereafter went to Waxahachie, Texas, where he practiced until his death. He was married to Miss Cordelia Cohn, daughter of Dr. and Mrs. Hiram Cohn, who with one son, Leonard, of Dallas, survive him.

DR. LEONARD KEPLINGER.

Dr. Keplinger achieved great success in his chosen work, and ranked high among the profession in that special field. He was a member of the Rotary Club, the Chamber of Commerce, the Presbyterian Church, and the Elks and Knights of Pythias Lodges. He

was for many years an active member of the Ellis County Medical Society and the State Medical Association of Texas.

Dr. W. H. Smith of Heidenheimer, died suddenly at his home, March 18, 1924, as a result of a stroke of apoplexy.

Dr. Smith was born in Pulaski, Tennessee, August 30, 1855. He received his early education in the schools of his community. He graduated in medicine from the University of Nashville in 1896, and began practicing at Roseville, Arkansas, removing to Sweetwater, Texas, in 1884. In 1886 he went to Bur-

DR. W. H. SMITH.

nett, Texas, where he married Miss Eleanor Hodge, March 13, 1887, who together with one daughter, Mrs. C. C. Baugh of Heidenhimer, survives him. In July, 1887, he moved to Heidenheimer, Texas, where he practiced up to the time of his death. Dr. Smith had been a member of the Bell County Medical Society for many years.

Dr. Byron B. Luck of Breckenridge, Texas, died April 5, 1924, in a hospital at Fort Worth.

Dr. Luck was born in College Park, Georgia, August 31, 1893. He graduated from Emory University, Atlanta, Georgia, in 1916, and served an internship at Bellevue Hospital, New York City. From New York he went to Minnesota, where he was for a time in charge of a hospital. From there, four years ago, he moved to Breckenridge, where he practiced up to the time of his death. He was County Health Officer of Stephens county, and had been City Health Officer of Breckenridge for two years.

On December 29, 1916, Dr. Luck married Mrs. Marie Benson, daughter of the late Dr. A. E. Sally of Augusta, Georgia. He was a member of the Methodist Church, a 32nd degree Mason, having taken both the Scottish and York rites, a Shriner, an Elk, a K. P, and a member of several other fraternal orders. He was a member of the Georgia State Medical Association, and a Fellow of the American Medical Association. He is survived by his widow, a son eight months' of age, his mother and three brothers.

BOOK NOTES

'Tis not by reading that true wit we test;
The bookish man is oft a fool, confessed!
—*C. P. B.*

The Successful Physician. By Verlin C. Thomas, M. D., Visiting Physician to Franklin Hospital, San Francisco. Octavo of 303 Pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $4.00.

The author's preface informs us that "The knowledge of medicine is the first essential, of course, in the practice of the medical profession. But it is not all, by any means, and to fill the gap between theory and practice, this book has been written."

The doctor who reads it will find it not only instructive, but suggestive, and stimulative of his thinking powers.

Practical Dietetics, With Reference to Diet in Health and Disease. By Alida Frances Pattee, Graduate, Department Household Arts, State Normal School, Framingham, Mass.; Former Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City, Etc., Etc. Fourteenth Edition, Completely Revised. Cloth, 12mo. pp. 646. Mount Vernon, New York. 1923.

The Thirteenth edition of this very excellent and justly popular text for nurses was reviewed, and favorably commended to our readers at the time of its publication, in 1918, and we must say that it has lost none of its value, but has gained much in worth by this late revision.

Miss Pattee is an author of unusual erudition and possesses a masterful knowledge of her favorite subject, such as should give her the right to be heeded as a teacher of incomparable merit. Her book is, therefore, entitled to a place upon the study table of every nurse and doctor in the land.

No greater proof of the popularity of this book can be offered than the fact that the copy under review had scarcely been laid on our table before pleas for its loan began to come in—in fact, it disappeared before we were through with it.

Operative Surgery. Covering The Operative Technic involved in the operations of general and special surgery. By Warren Stone Bickham, M. D., F. A. C. S. Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York, Former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six octavo volumes totaling approximately 5,400 pages with 6,378 illustrations, mostly original, and separate Desk Index volume. Now ready—Volume I, containing 850 pages with 921 illustrations. Volume II, containing 877 pages with 1,008 illustrations. Volume III, containing 1,001 pages with 1,249 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, $10.00 per volume. Sold by subscription only. Index Volume Free.

VOLUME II, contains fourteen chapters, discussing cedures Employed In Surgical Operations and General Operative Surgery. It is subdivided into twelve chapters, as follows: Preparations for Operations; Special Anesthesia and Analgesia; Conduction of Operation—General Operative Technics; After Care of Patients; Skin Grafting—General Principles; General Principles of Reformative, Reconstructive or

Plastic Surgery; Dermoplasties, in General; Transplantation of Tissues and Organs in General; The Usage of Hydrocarbon Prostheses; Amputations and Disarticulations; Cineplastic Amputations and Cinematic Prostheses; Artificial Limbs—Their Types and the General Features of Their Adjustment; Excisions and Osteoplastic Resections of Bones and Joints.

VOLUME II, contains fourteen chapters, discussing Operations Upon the Arteries, Veins, Lymph Glands and Vessels, Nerves, Plexuses and Ganglia; the Bones, Joints (other than Excisions,)—The Muscles, Tendons, Tendon Sheaths and Ligaments; the Cartilages, Bursae, and Fascia and the Skull, Brain, Spine and Cord. The volume is concluded with a copious index.

VOLUME III contains 28 chapters, as follows: Operations upon the Eyes and their Accessory Structures; the Ears and Their Adjunct Structures; the Nose; the Osseous Air-Sinuses of the Head; the Cheeks; the Lips; the Teeth; the Hard and Soft Palates; the Tongue; the Pharnyx; the Salivary Glands and their Ducts; the Larynx; the Trachea; the Esophagus; the Thyroid Gland; the Thymus Gland; the Thyreoglossal Duct; the Remains of the Branchial Clefts; Cervical or Supernumerary Ribs; the Carotid Body; the Neck; the Breast; the Thoracic Wall, Exclusive of those for Intrathoracic Procedures; General Principles of Intrathoracic Surgery; Exposure of the Thoracic Cavity in General; the Pleurae; the Lungs, and the Mediastina. The volume concludes with a comprehensive index.

The active connection of the author of this work, with three of the greatest hospitals in this country, sufficiently establishes his right to the careful attention of our best surgeons and faculties of medical colleges. And, if these first volumes are to be accepted as a further warrant of the value of the additional, forthcoming three volumes, we may safely commend them to the profession.

Hernia: Its Anatomy, Etiology, Symptoms, Differential Diagnosis, Prognosis, and Operative Treatment. By Leigh F. Watson, M. D., Associate in Surgery, Rush Medical College, Chicago, Ill., Cloth 8vo pages 660, with two hundred and thirty-two original illustrations by W. C. Shepherd. C. V. Mosby Company, St. Louis. 1924. $11.00.

This work begins with an interesting and instructive chapter on the History of Surgery, with special reference to operations for hernia, one of the latest procedures for the relief of human suffering. Then follows, General Considerations of Hernia; Complications of Strangulation; Partial Enterocele; Hernial Tuberculosis; Hernia and Volvulus of the Omentum; Fatty Hernia; Local Anesthesia in Hernia Operations; Inguinal Hernia; Anatomy of Inguinal Hernia; Etiology of Inguinal Hernia; Symptoms, Diagnosis and Prognosis of Inguinal Hernia; Treatment of Inguinal Hernia; Inguinal Hernia in Infants and Children; Femoral Hernia; Umbilical Hernia; Ventral Hernia; Diaphragmatic Hernia; Internal Hernia; Lumbar Hernia; Obturator Hernia; Sciatic Hernia; Perineal Hernia; Hernia of the Large Intestine; Hernia of the Vermiform Appendix; Hernia of Meckel's Diverticulum; Hernia of the Bladder; Hernia of the Ureter; Hernia of the Ovary; Hernia of the Fallopian Tube and Uterus; Medico-Legal Aspects of Hernia.

In a brief Preface, the author has given an analysis of his book. He states that it was written to set forth in the smallest space the leading features, anatomy, etiology, symptoms, diagnosis, differential diagnosis and prognosis of herniae, together with the best operative technic of modern surgeons.

Much valuable historic matter is interspersed throughout chapters requiring such information. Dr. Watson seems to have about exhausted the sources of information, both technical and historical in his field. Much careful work is apparent in the detail with which the technic of the various operations is given. The bibliography is large and edifying.

Problems In Tuberculosis: Administration, Diagnosis, Employment, Settlements. By Sir James Kingston Fowler, K. C. V. O., K. C. M. G., M. A., M. A., D. Sc. (Hon.), F. R. C. P., Consulting Physician and Emeritus Lecturer on Medicine, The Middlesex Hospital; Consulting Physician to the Brompton Hospital for Consumption and Diseases of the Chest, and to King Edward VII Sanatorium; Member of the Colonial Advisory Medical and Sanitary Committee. Small 8vo Cloth, Pages 64. London, Henry Frowde and Hodder & Stoughton, The Lancet Building, 1 Bedford Street, Strand, W. C. 2. $1.50.

Sir Fowler is the author of several books dealing with tuberculosis, and "A Dictionary of Practical Medicine." Problems in Tuberculosis "deals with some of the questions which have arisen on the administrative side of the tuberculosis problem," and the author hopes that it "may be of use as an aid to the formation of opinion on matters of considerable national importance."

After the Introduction, in Chapter I, fifteen chapters are devoted to: Landmarks and Incidents in the Struggle Against Tuberculosis; Prevalence of Tuberculosis; Mortality; Infection; Diagnosis; The Tuberculosis Service; Notification; The Tuberculosis Dispensary; The Sanatorium; The Settlement; The Hospital; Huts, Hostels, Cottages, and Industries; The Settlement as a Community; Hygienic Workshops; After-Care Committees and Domiciliary Treatment.

The Medical Interpreter. A Quarterly Digest of Medicine and Surgery, Domestic and Foreign. Selected Practical Foreign Medical and Surgical Literature. Albert Allemann, A. B., M. D., Principal Assistant Librarian, Surgeon General's Library, Army Medical Museum; Co-Editor Index Medicus, Editor-in-Chief, Washington, D. C., With the Aid of the Medical Corps, United States Army, and the Bureau of Medicine and Surgery. Cloth, 8vo, Pages not Numbered. 161 articles with Illustrations. Medical Interpreter, Washington, D. C., 1924.

The 161 articles extending through the alphabet, from Abscess to Wounds, are of rare value for daily use, by the busy doctor, and the favorable comments in this JOURNAL, on the excellence of the preceding five volumes, are in every sense applicable to this one.

"This number contains articles on the following subjects, with the names of their authors, covering, The World's Most Recent Practical Advances and Attitudes on Diagnosis, Treatment and Practical Surgical Technic; Abscess; Acidosis; Adhesions; Anesthesia; Anaphylaxis; Angiospasm; Ankle Joint,' Artificial; Anthrax; Anus Praeternatualis; Aortic Sclerosis; Appendicitis; Army Medical Museum; Arterioscelerosis; Arthistis; Asthma; Birth Control; Bladder; Blood; Botulism; Breast; Calculus; Cancer; Carbonated Beverages; Carbuncle; Clavicle; Cocain Poisonin; Colloids; Copitis; Conception; Cornea; Creosoform Cystitis; Diabetes-Insulin Treatment; Senile Diabetes, and Diabetes Insipidus; Digestive Disorders in Children; Ductless Glands, Dysmenorrhea-Nasal Treatment of; Dyspepsia; Eclampsia; Eczema; Empyema; Encephalitis Lethargica; Endocarditis; Endocrinology; Epilepsy; Epithelioma; Erythrocytes; Erythromelalgia; Eye Diseases; Face, Plastic Surgery; Gall-Bladder Disease, and Gall

Stones; Gangrene; Gastro-enterostomy; Goitre, Exophthalmic, and Medical Treatment of Goitre; Gonorrhea; Haemoglobinuric Fever; Hemmorrhage; Hemorrhoids; Helminthiasis; Hip Joint; Hydrocephalus; Hypertension; Hyperthyroidism; Influenza, Infantile; Injections, Intravenous; Intestines, Cancer-Ulcer; Intussusception; Iritis; Jaw-Dislocation; Jejunum-Ulcer; Joints-Treatment; Keratitis; Labor; Kidney; Lactation; Laporotomy; Liver; Lumbago; Lumbar Puncture; Lungs; Malaria, (2); Mandible-Dislocation; Menorrhagia-Young Girls; Menstruation-Painful; Morphine Habit; Nails-Operation, Ingrown; Neuritis; Ophthalmia; Ozeena-Surgical; Paralysis Agitans; Patella-Transplantation; Peritoneum-Adhesions; Peritonitis-Tubercular; Plaut-Vincent's Angina-Treatment; Pregnancy; Protein Therapy; Psoriasis; Puerperal Hemorrhage; Pyelitis; Pyelocystitis; Quinine-Dangers of; Radium; Rejuvenation; Rectum; Rheumatism; Rheumatic Fever; Serotherapy-Accidents; Serum Vaccines; Sero Bacterins; Skin Grafting—New Methods; Sleeping Sickness; Snake Bites; Spider Bites; Spinal Curvature; Sterility; Stomach; Subdiaphragmatic Abscess; Syphilis; Tabes Dorsalis; Tapeworm, Tests, Thiosinamin; Thrush; Thyroid Gland; Tonsilitis; Transfusion; Tubercle Bacillus-Destruction by Chlorine; Tuberculosis; Ulcer-Gastric; Urticaria; Uterus-Retroversion. Method of Fixation; Vagina; Vaginitis; Venesection; Vertigo; Vomiting in Pregnancy; Warts; Whooping Cough-Treatment with Luminal Injections of Blood from Convalescents; Worms-Intestinal; Wounds-Treatment.

There has been some criticism of this publication. our opinion it stands out peerless in this field of medical journalism, and we commend it to our readers. The volumes are well and beautifully bound, and will be an ornament to any office or library.

Physics and Chemistry for Nurses. By A. R. Bliss, Jr., A. M., Phm. D., M. D., Grady Hospital Training School for Nurses, Atlanta, and A. H. Olive, A. M., Ph. Ch., Phm. D., Hillman Hospital Training School for Nurses, Birmingham, (Ala.). Third Edition. Thoroughly revised and Rewritten, and Conforming to the Requirements of the Standard Curriculum (1922) of the National League of Nursing Education, with an Able Board of Collaborators of Graduate, Registered Nurses. Cloth, 8vo., pages 190, and 70 Illustrations. J. B. Lippincott Company, London and Philadelphia. 1923.

This little volume is dedicated to the memory of the nurses who so nobly and cheerfully sacrificed their lives during the World War, in the cause of humanity.

The authors and collaborators have in writing and preparing this book, kept in view "five guiding principles: (1) The special application of physics and chemistry to nursing; (2) the need of a careful limitation of the material presented, necessitated by the brief time allotted to the course in the standard curriculum; (3) the judicious elimination of material presented in previous editions, which is possibly more logically given by other departments of instruction; (4) the importance of simplicity and lucidity in the consideration of scientific facts and theories, and (5) the importance of suitable laboratory work of practical value.

Many new requirements of the standard curriculum have rendered the study of physics and chemistry imperative in the nurses' courses. Practically every examining board is including questions in physics and chemistry as part of the examinations for registered nurses. The authors, in the preface, rejoice that the standards of nursing education are being raised with a resulting uplift in the efficiency of nursing. If the educated women could be induced to adopt nursing as a profession, such prospect would be very cheerful, but as a matter of fact few of our nurses are of that type, and the standards of nursing education are already so high that the supply is failing, and has been for some years, because of the time required to achieve registration and membership in the nurses' organizations. To lay upon student nurses the task of first acquiring college degrees, and then three or four years internship in a hospital, would be to discourage well qualified persons from entering the profession.

This book has its mission. It will be valuable as a stimulus and ought to have a wide circulation among both doctors and nurses.

The Heart in Modern Practice, Diagnosis and Treatment. By William Duncan Reid, A. B., M. D., Chief of Heart Clinic at the Boston Dispensary; Junior Assistant Visiting Physician and Member of the Heart Service at the Boston City Hospital; Formerly Assistant Visiting Physician to Out-Patients at the Massachusetts General Hospital. 32 Illustrations. Cloth, pages 8vo, 352. J. B. Lippincott & Company, Philadelphia and London. 1923.

The text is based upon the recent advances in the study of the heart in health and disease, and the author thinks, after a wide reading of the literature, that there is "no single book in the English language suitable to recommend to the student or physician who asks for a single volume in which he may read up on the subject," because so many have limited themselves to the study of the abnormal rhythms of the heart, and the presentation of that aspect alone. The author believes a more general study and presentation of the subject should be placed at the disposal of students and practicians in a single volume.

The text is divided into five sections, as follows: Section I, Preliminary Considerations; Section II, Types of Heart Disease (Etiologic); Section III, Functional Conditions; Section IV, Structural Lesions, Section V, Treatment. Illustrated Case Reports, are added as an appendix.

Physically the book is characteristic of this great publishing house, and the subscriber will be pleased with it.

War Blindness at St. Dunstan's by Sir Arnold Lawson, K. B. E., M. D., F. R. C. S., L. R. C. P., Senior Ophthalmic Surgeon and Lecturer on Ophthalmic Surgery, Middlesex Hospital; Late Surgeon, Royal London Ophthalmic Hospital, Etc., Etc. Cloth. Small 8vo pages 148. London, Henry Frowde and Hodder & Stoughton, The Lancet Building, 1 Bedford Street, Strand, W. C. 2.

This is a "connected history of over five years' medical work amongst the war blind at St. Dunstan's" from "the latter months of 1914 to May, 1920, by which time the vast majority of those blinded in the Great War by wounds or disease had come to the Hostel."

There were 1833 men of all ranks admitted to St. Dunstan's up to eighteen months after the armistice, of whom 26 per cent were blinded by disease, syphilis being largely responsible. The remaining 74 per cent were blinded from traumatic causes. Not one commissioned officer was blinded by disease.

The text is divided into three parts, and subdivided into ten chapters. Part I is composed of two chapters on Traumatic Blindness; Part II, treats of Non-Traumatic Blindness, and Part III, Pensions and Re-Education. The book will be of much aid to the student in this field.

MURFF FRANKLIN BLEDSOE
Port Arthur, Texas
Fifty-Seventh President State Medical Association of Texas

Texas State Journal of Medicine

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Vol. XX **June 1924** **No. 2**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Dr. Murff Franklin Bledsoe, the Fifty-seventh President of the State Medical Association of Texas, was born in Bossier Parish, Louisiana, near Shreveport, September 24, 1879. He was the fifth of a family of nine children. His father, W. H. Bledsoe, a Confederate veteran, was one of two out of seven brothers who survived the war between the states. His paternal ancestors were from Scotland and his mother was of the Arnolds of Georgia, noted among the patriots and statesmen of that commonwealth. In his family, on both sides, the professions have predominated in the matter of vocation, the law and ministry leading but medicine taking its part. History attributes to his family the elements of statesmanship and courage to a degree worthy of comment.

Brought up during the reconstruction period in the South, Dr. Bledsoe had limited opportunities for education, but attended such schools as were available, including night schools. When 19 years of age, he received a first-grade certificate to teach school, which served as his educational requirements for taking up the study of medicine. His first year in medicine was in the University of Tennessee (Memphis Hospital Medical College), in 1899, from which institution he graduated in 1902, having in the meantime taken the second year in the Kentucky School of Medicine, at Louisville. Having graduated, he located for the general practice of medicine in Rockland, Tyler County, Texas, where he engaged in an industrial practice until 1910, when he moved to Port Arthur, where he has since resided. He has limited his practice to general surgery for the past ten years.

Dr. Bledsoe has been a close student of medicine, both scientific and economic, since the beginning of his medical career. He has taken numerous postgraduate courses, visiting practically all of the larger clinical centers in so doing. His library is extensive, including the leading publications in medical literature, both current and text-book. He has contributed frequently to medical literature, devoting his attention principally to surgical and gynecological subjects, and to the State Medical Association, the Southern Medical Association and the Texas Surgical Society. He has been a free contributor to the scientific programs of his county and district medical societies, as well. Among the notable contributions made by Dr. Bledsoe to medical literature, may be mentioned the report of the thirty-second case of simultaneous bilateral tubal pregnancy, to be reported in the literature, made in the section on Surgery of the Southern Medical Association, in 1917,[1] and a case of aneurism of the abdominal aorta causing chronic pylorospasm with cardiospasm and hiccough, in which gastroenterostomy was done, with complete relief. The report was made before the Texas Surgical Society, and has been accepted for publication by *Surgery, Gynecology and Obstetrics.*

Dr. Bledsoe's connection with organized medicine dates from the year of his graduation, 1902, at which time he joined the Tyler County Medical Society, soon becoming its

1. Jour South. Med. Assn., Vol xl, p. 307, April, 1918.

secretary. Following the reorganization of the State Association, in 1903, he joined the Jefferson County Medical Society, where his membership has since resided. He participated in the activities of the early reorganization days, and in 1912 was elected president of his county society. In 1914 he was made president of the South Texas District Medical Society, which organization covers the eighth, ninth and tenth councilor districts. In 1915, he became vice-president of the State Medical Association, and in 1917, he succeeded Dr. A. R. Sholars of Orange, as Councilor of the Tenth District, which district he has served as vice-councilor for several years. He became secretary of the Board of Councilors in 1918, and chairman in 1919, holding the latter position until his election to the presidency of the State Medical Association in 1923. In the early months of the World War as chairman of the Board of Councilors, he rendered valuable assistance to the Adjutant General of Texas in organizing the district medical boards for the control of civil and military medical service. As soon as this work had been concluded, he applied for and received commission in the Medical Corps of the Army, and served in Camp McArthur at Waco, and later as chief of the surgical service, General Hospital No. 20, Whipple Barracks, Arizona. He was discharged as Captain, in 1919. In addition to his county, district and state medical society affiliations, he is a Fellow of the American Medical Association and of the American College of Surgeons, a member of the Mississippi Valley Medical Association, the Southern Medical Association and the Texas Surgical Society.

Dr. Bledsoe has been an advanced thinker along the line of medical economics for several years. He served the State Association as chairman of the committee appointed to give special consideration to the problems arising from the State Compensation Act. His committee inherited the problems of compensation, including those of health insurance. The fact that Texas is believed to have the best Compensation Act in the country, and that health insurance has been successfully warded off, speaks volumes for the work of this committee, mainly under the leadership of Dr. Bledsoe. Recognizing his devotion to duty and his knowledge of the public health, he was offered the position of State Health Officer soon after Governor Neff assumed office. He declined the appointment, but agreed to serve on the Board of Health, which he has done throughout the Neff administration.

Dr. Bledsoe does not confine his efforts to medicine. He is an active participant in most of the civic affairs of his community, and very largely of the State. He has for six years been a Trustee of the Port Arthur public schools, the last three of which he has been President of the Board. During this time there has been established in Beaumont what is generally conceded to be one of the best public school systems in the United States. He is a member of the Board of Directors of the Port Arthur Chamber of Commerce. He is a Mason of high degree, a member of the Knights of Pythias, an Elk, past president of the Rotary Club, and belongs to the Methodist Episcopal Church, South, of which church he is one of the trustees. He is also an honorary member of the Phi Beta Pi Medical Fraternity, and is chairman of the staff of the Mary Gates Hospital, at Port Arthur, which position he has held for a number of years.

Dr. Bledsoe attributes whatever of success he has attained in his chosen profession and in his public life, to the fact that he became the husband of Miss Ella Jackson, daughter of Thomas F. and Jennie Jackson of Lavaca County, Texas. He was married in 1903. There are four children in the Bledsoe household, Miss Beulah Floy, a graduate of the Port Arthur high school and National Park Seminary, Forest Glen, Maryland; Murff Jr., a freshman in the A. & M. College of Texas, in which institution he is taking a premedic course, and Elizabeth and Ella Lucille.

It should be clear to the reader who is not personally acquainted with Dr. Bledsoe, that we have done well in the selection of our President. It is said that success breeds success, and the reader is assured that the above recital of the career of Dr. Bledsoe is rather conservative. He is extremely proud of the honors that have come to him in his election to the presidency of the State Medi-

cal Association, and proposes to give to our organization the best that is in him. That should mean a great deal to us, when we consider what he has accomplished thus far in many directions, not the least of which has been his financial success, which has been attained entirely through his own personal efforts. His knowledge of our affairs and his long anticipation of our needs, can but conduce to the ultimate if not immediate success of our cause, the leadership of which he now assumes in fact. We are certain that we can pledge to him the hearty support of his fellows in the medical profession.

The San Antonio Meeting, as had been anticipated, proved to be most delightful and pleasing. Indeed, that is about the only criticism we have to make of it. There was so much genuine, personal hospitality, and so much opportunity for play, that we found it difficult to get down to work and stick to it. There was a perfect whirlwind of entertainment, official and unofficial, according to the program and in addition thereto. We thank the arrangement committee and the good people of San Antonio most heartily, and will call again soon.

The attendance was 1,017, exclusive of "Visitors," under which category we include the Woman's Auxiliary, and of which group there were more than 500. The largest registration we have ever had was 1,204, at Dallas, in 1917. Last year, at Fort Worth, there were 1,123. It will be seen that the San Antonio registration was probably 100 below that of Fort Worth and 200 below the largest attendance on record, which makes it one of the most popular meetings we have ever held. The attendance of the ladies is getting to be an item. In this day of woman's suffrage, we seem to be keeping abreast of the times—or, perhaps, the women are keeping abreast of us, which is a pleasure, we hasten to say. That the Woman's Auxiliary is going to be an important factor in our organization is evidenced by two incidents which occurred at San Antonio. A representative of that organization met with our Council on Legislation and Public Instruction, and entered definitely into our plans for the future. Our President officially addressed the Auxiliary, pointing out the possibilities of co-ordination and co-operation. We are rather encouraged that the Woman's Auxiliary is beginning to definitely carry out its announced purposes of helping the medical profession to put over its program. While the social features of their organization are to be emphasized, their opportunities for scientific and political assistance are extensive and should be taken advantage of. This we confidently expect them to do.

Our General Sessions, designed to give the general body an opportunity to participate in the government of the organization and to get together on big questions, were not so well attended as heretofore, which was particularly regretted, because of the character of the program. It seems that the difficulty was, in one instance, to get the scientific sections to adjourn in time, and in another instance everybody seemed to be in a hurry to get off to some social function. Those who failed to attend these sessions not only denied themselves a pleasing and profitable hour, but delayed proceedings to the extent that the program in two instances failed to completely materialize. At the first General Session, held in the big Ball Room of the Gunter Hotel, there was standing room only, and very little of that. The President delivered his annual address on this occasion, and it was well received. It appears elsewhere in this number of the JOURNAL. Our friend, the Hon. O. B. Black, made a delightful talk, and the musical program was most pleasing.

The second General Session, the next afternoon, was delayed considerably by failure of the audience to assemble. This meeting had been carefully planned, with a splendid program. Because of the delay in getting together, only a part of the program was rendered, and the addresses had to be so hurried that their effect was not as good as it would otherwise have been. Nevertheless, the relationship of the medical profession, including the professions of dentistry and pharmacy, was gone into thoroughly. It is to be regretted that there were so few lay-

men and not so many physicians who heard it. These addresses will be found elsewhere in this number of the JOURNAL, and they should all be read. The address of the Honorable Wayne Davis of San Antonio, carries a message and an admonition that should be considered seriously. The address of Dr. Rosser is an example of what might well be said to a lay audience at any time. Those who have occasion to deliver public health addresses during the forthcoming publicity campaign, may get some valuable suggestions therefrom. It is interesting to note that the dentists and the pharmacists also have their problems, much along the lines of our troubles, and are both engaging in campaigns of a similar, although more restricted, character. There would seem to be no reason why these professions might not join with us in our campaign. We are certainly in sympathy with them in their endeavors.

The General Session on the third day was devoted primarily to a consideration of the problems of the care and treatment of the insane. Those who have been in the forefront of medical endeavor in this State for the past several years, will recall that there was at one time a standing committee on this subject. Year after year, this committee endeavored to induce the Legislature to correct the evil that is again being complained of, namely, the inhumane and unscientific treatment of our mentally sick and potentially dangerous, though none the less deserving citizens. The two addresses on this subject were most effective, and together constituted an indictment of our State Government calculated to astonish and shame every thoughtful man and woman in the State. At the conclusion of the addresses, resolutions were adopted, calling upon the Legislature to correct the evils complained of, and directing the President to appoint a committee of seven to handle the situation.

The General Session held in memory of our departed fellows, was well attended, the music was splendid, and the principal address, delivered by Dr. H. W. Cummings, Chairman of the Memorial Exercise Committee, was good. This address appears elsewhere in this number of the JOURNAL. One feature of the meeting deserves special comment. Mrs. Harry L. Leap, whose husband was chairman of one of the local committees for the Annual Session, and who died the Saturday before, had charge of the music for these exercises. Notwithstanding her bereavement, she was present and presided at the organ. This fact was made known to the audience and it seemed as if the sympathy and appreciation of that large body of friends could be definitely felt.

The pulpits of the city, as per custom, were filled on the Sunday preceding the opening meeting, as follows:

First Presbyterian Church, Dr. Hill, pastor, Dr. John O. McReynolds of Dallas; St. Mark's Episcopal Church, Dr. Houston, pastor, Dr. W. B. Russ of San Antonio; Central Christian Church, Dr. Hugh McClellan, pastor, Dr. I. C. Chase of Fort Worth and Dr. J. J. Terrill of Dallas; Madison Square Presbyterian Church, Dr. Brand, pastor, Dr. M. F. Bledsoe of Port Arthur; Beacon Hill Baptist Church, Dr. Eidson, pastor, Dr. E. H. Cary of Dallas; Riverside Baptist Church, Dr. E. B. Herndon, pastor, Dr. E. H. Cary of Dallas; Baptist Temple, Dr. Albert Beddoe, pastor, Dr. R. E. Beddoe of Dallas; Calvary Baptist Church, Dr. W. W. Lee, pastor, Dr. R. E. Beddoe of Dallas; First Congregational Church, Dr. M. O. Lambley, pastor, Dr. I. L. McGlasson of San Antonio; Harlandale Baptist Church, Dr. South, pastor, Dr. F. U. Painter of Corpus Christi; Business Men's Bible Class at Gunter Hotel, Dr. I. L. McGlasson of San Antonio; First Baptist Church, Dr. Gates, pastor, Dr. J. J. Terrill of Dallas.

The meetings held on Monday before the opening session, were well attended and were said to have been most profitable. They will be referred to elsewhere in this number of the JOURNAL.

The following invited guests honored the Association with their presence, counsel and advice: Dr. Stewart R. Roberts, Atlanta, Ga.; Drs. W. W. Battle, Alec P. Harrison and Mr. V. M. Ehlers, with the State Board of Health, Austin; Dr. H. B. Matthews, Brooklyn, N. Y.; Mr. R. E. Tarbett, of the U. S. Public Health Service, El Paso; Major John B. Hawley, Fort Worth; Dr. W. A. Pusey, President-Elect of the American Medical Association, Chicago, Ill.; Lieutenant-Colonel Raymond Metcalfe, Fort Sam Houston; Dr. S. E. Rudd, Rochester, Minn.; Dr. C. Jeff Miller and L. R. DeBuys, New Orleans; Dr. Everett S. Lain, Fraternal Delegate from the Oklahoma State Medical Association, Oklahoma City; Mr. W. H. Whisenant, Fraternal Delegate from the State Pharmaceutical Association, San Antonio; Dr. S. B. Riggs, Fraternal Delegate from the State Dental Society, San Antonio, and the Honorable Wayne Davis, San Antonio.

The Scientific Work of the Annual Session seems to have been unusually satisfactory in most particulars. The opinions of members of the Committee on Scientific Work and officers of Scientific Sections, vary somewhat in detail, but there is a general agreement that the plan of procedure adopted by the section officers, upon the advice of the

committee, is in the right direction. It seems that twenty-five papers is about the limit, as to number, that can be properly handled by a section in the two days and a half available for the purpose. It is the experience of those in charge of the scientific sections each year, that much time is lost in beginning the sessions, because of the visiting among members of the sections. It is not possible to prevent this, and it seems unfair to the first essayist on the program that he should be required to present his paper before a small audience when it is reasonably certain that a large audience will be present in a few minutes. The method decided upon for the selection of contributions, worked very well in most instances, but was occasionally a flat failure. It is rather difficult to induce some authors to enter an essay in competition. Most of our contributors feel that their reputation should entitle them to an invitation. Of course, this is the proper procedure in a small group, but is an impractical proposition for large organizations. The American Medical Association, for instance, could not begin to be selective and at the same time bring out new talent, by the invitation route, although, no doubt, well known authors are from time to time invited to make contributions. That will likely be the solution of our problem. Prospective authors will submit their papers, in at least tentative form, which will not necessarily exclude personal appeal from section officers. It seems that the requirements of the by-laws that papers be certified to section officers as having been read before county or district societies, was not generally complied with. Quite a large number of the papers were so certified, but there was enough disregard of this very ordinary and sensible requirement to cause comment. Section officers did not feel justified in excluding from presentation, at least on this first occasion, papers failing in this particular. It was generally conceded that the scientific papers were of an unusually entertaining type and better prepared than is ordinarily the case. There is still too much time killed in attempts to illustrate papers in particulars not necessary of illustration. Occasionally a most excellent paper is spoiled in this manner. An audience is quick to grasp any attempt at boosting or padding, and an author must have a very good reason for adding either words or pictures, whether by lantern or otherwise, to his essay. Certainly, lanterns should not be used except there are good reasons for it, in view of the fact that the room must be darkened, and ventilation thereby interfered with. It must not be understood that the criticism here applies generally, and not specifically. As a matter of fact, the enterprise of an author in preparing properly designed and executed illustrations, is usually appreciated, where indicated.

A new scientific section, "Radiology and Physiotherapy," was added, by amendment to the By-Laws.

Dr. C. M. Rosser of Dallas, was elected President-Elect, and Drs. S. J. Alexander of Hearne, J. W. Gidney of West and P. H. Chilton of Comanche, Vice-Presidents. Dr. M. L. Graves was re-elected Trustee, and Drs. R. B. Homan of El Paso, Joe Dildy of Brownwood, R. H. McLeod of Palestine and A. B. Small of Dallas, were re-elected councilors. Dr. J. H. Caton of Eastland, was added to the Council, in place of Dr. J. F. Bunkley of Seymour. Drs. J. W. Burns of Cuero and A. C. Scott, Sr., of Temple were elected delegates to the American Medical Association, with Drs. Thomas Dorbandt of San Antonio and R. W. Knox of Houston, as Alternates. Retiring members of the Council on Medical Defense and Council on Legislation and Public Instruction, were re-elected.

Austin was chosen as the next place of meeting.

The Scientific Exhibits of the Annual Session are deserving of special comment. For years, enterprising and energetic committees have endeavored to gather together scientific exhibits worthy of attention and the time of the busy visitor. These efforts have generally been complete or partial failures. Only once before, so far as we can now recall, was the effort anything like a real success. The Committee on Scientific Exhibits, headed by Dr. B. F. Stout of San Antonio, succeeded in securing a most creditable group of material for exhibition and, most fortunately, selected a location for the exhibit where both the profession and the public could view it. The lobby of the Gunter Hotel was given over entirely to this project. A letter from Dr. Stout, in answer to our inquiry, may be quoted from most advantageously, in this connection:

"The exhibit exceeded my expectations, and proved to my satisfaction that (1) a scientific exhibit can be secured for each annual session; (2) a properly arranged scientific exhibit is appreciated by the visiting physician, and (3) such an exhibit is of educational value to the lay public and will attract the attention of the lay public.

"As a matter of fact, more laymen than physicians viewed the exhibit. Teachers and preachers particularly commented on its value, and many of them advised those to whom they spoke to see the exhibit. Several laymen were heard to remark that, in the light of the pathological specimens shown, it was hard to understand how christian scientists or chiropractors could hope to be successful in their absurd claims as to the existence or non-existence of disease, and the methods of curing it if it does exist.

In this connection, it was clearly demonstrated that the greatest value of an exhibit of this sort is the impression it will make on the *casual* visitor, whether professional or lay, and the way to attract attention is to install the exhibit in a perfectly accessible place. An obscure location will destroy the value of the most instructive exhibit. We desire to extend our thanks to the Gunter Hotel management for the use of its lobby for this purpose.

"In this connection, further, those of our members who attend the forthcoming annual session of the American Medical Association should give special attention to the scientific exhibits to be shown there. The prospects are most promising, and perhaps some of us will be inspired to return home and attempt to prepare something of the sort for our next annual session.

"Our committee desires to extend thanks to the Medical Department of Baylor University, the American Legion Hospital at Kerrville, and the Twentieth Medical Regiment at San Antonio, for the splendid exhibits furnished by these institutions. I might say, in passing, that it is rather unfortunate that the Medical Department of our State University should be so inhibited in the matter of expenditure of funds, as to prevent the installation of a scientific exhibit from that institution. The authorities were perfectly willing and, in fact, anxious to make such an exhibit, but there was no appropriation available for the purpose."

The Business Transacted at San Antonio, will be found set out in full, in the Transactions, beginning on page 98. It is the earnest desire of those responsible for the conduct of the affairs of the State Association, that these Transactions be read in full by each member. Certainly those who are looked upon as leaders in the profession should go to the trouble and take the time necessary to acquaint themselves with what was done and how it was done. It is nonsense to criticise, not to say unfair and unjust, without a knowledge of connecting circumstances. This knowledge can be gained in no other way than by actually being present, or by reading the Transactions of the House of Delegates and of the General Sessions. The Trustees go to considerable expense in having a verbatim transcript of these proceedings taken and then published in the JOURNAL, for exactly this purpose.

The few who take part in the formulation of policy and the conduct of our affairs, so often called "the ring," are perfectly willing to serve, but they are not desirous of incurring the penalty of criticism, and it is our observation that not so much criticism comes from those who inform themselves. For instance, hardly a member of the House of Delegates would have committed himself to the policy of increasing the dues, in advance of the consideration of the problems before us at this time, and the discussion which followed, and yet the increase was voted by an unsually large majority. There will be criticism of this action, and perhaps harsh criticism, criticism that would not be so readily advanced if all of the circumstances were known. Perhaps we should add that the debate on this subject is not published, for the reason that it took place in executive session.

We will enumerate some of the outstanding business transacted.

To begin with, 91 county societies out of a total of 136, were represented by 98 delegates, and there were present 29 *ex-officio* members of the House. The sessions of the House were well attended, and business-like. The discussions were free and without bias or embarrassment. The reports of officers and standing committees were in type and much time was saved by presenting them in that shape, for the consideration of delegates at greater leisure. These reports were commented upon at the time of presentation, which procedure insured against total neglect of these important and necessary items.

The membership had increased somewhat over the same period of the year previous, and the state of organization was reported as satisfactory. There had been some changes made among the county societies, two different groups of societies breaking up into two societies each, and the charters of two or three of the weaker societies having been revoked. The Board of Councilors reported having had some difficulties by way of enforcing the laws of the Association, but it appeared that the situations involved were well on the way to satisfactory adjustment.

Financially, the Association is holding its own. There has been a steady growth and healthy improvement, notwithstanding the unusually heavy expenditures and the increasing obligations of the past year or so. The amount of money on hand, its source, method of handling and disposition, is clearly set out in the report of the Board of Trustees (page 103). At first glance, this report appears to be rather intricate and difficult to understand, but it is really very simple. Of particular interest will be the statement of assets and liabilities, at the beginning of the report. The total assets of the Association are there stated as $68,-807.22. The total liabilities are $16,801.00. The principal liabilities are the unearned dues. This money is ours now, but we will have to function the balance of the fiscal year before the auditor will let us claim it, and it will cost money to so function. The "comparative statement" of each fund, later on in the report, is illuminating as to the sources of our income and for what purposes expenditures were made, showing the amount of increase or decrease of each item for the year, over that of the year previous.

The net earnings of the Association for the year were $9,827.12, but that included the gifts and interest. The gifts may not be said to be earnings, although interest is properly so classified. The actual earnings were $4,219.78. The earnings would have been materially increased had it not been necessary to close the books two weeks earlier than is usually the case, thus excluding the most profitable two weeks of the year.

The report of the Council on Legislation and Public Instruction (page 108) is of particular moment at this time, when candidates are offering for office and seeking the support of physicians. The last annual report of this Council set out in detail the public health proceedings of the regular session of the 38th Legislature, but could cover only a part of one of the called sessions. The report above referred to carries the story on and brings it up to date. The legislative history of any member of the 38th Legislature may be found in the two reports, and it should be known to every member of every county society in the State, particularly as it relates to their respective legislators. In this connection, we may say that the Council plans to publish in the June JOURNAL a complete statement of the status of candidates for such offices (not including the legislature) as we may be interested in. Reverting to the report above mentioned, there is a discussion there of the attitude of the profession towards the enforcement of the Medical Practice Act, and to the proposed publicity and educational campaign. In this connection, it was decided to begin the campaign June 1, and the Council was instructed to call upon county societies for the completion of a volunteer fund for the present year.

It is of interest to note that the problem of malpractice suits, which has heretofore caused us much concern, is apparently growing less of a menace. There were only five new cases during the year. There were twenty-two old cases on hand, three-fourths of which it was estimated will never come to trial. Five cases had been disposed of during the year. There was one adverse judgment, the first in the history of this movement, which was on appeal when a compromise was effected. The Council is participating in a test of the Injunction feature of the Medical Practice Act, and it is the opinion of the General Attorney of the Association that this feature of the law will be upheld.

The preparation of the long discussed medical history of Texas was reported as under way. Much valuable material had been collected and was still being procured. The Committee on Collection and Preservation of Records, and the Board of Trustees, recognize that much work of this sort will be necessary before the actual compilation of the history may profitably be undertaken, and they have wisely refrained from spending money in organizing for the actual production of the history until more data has been secured.

Resolutions were adopted approving of the Citizens' Military Training Camps, and offering the services of the profession in the matter of physical examination and typhoid and smallpox vaccination.

A resolution was also adopted, calling upon the two medical colleges in Texas to arrange for lecturers on the history of medicine. This resolution was introduced at the instance of the Ex-Presidents' Association. It has become quite evident that the doctors being graduated at this time are filled with scientific knowledge often to the exclusion of that inspiration which should be the basis of medical practice. As was said, there seems to be no reason why the premedic studies could not include such a course, on the ground that it is of more importance that the medical student know some of the outstanding and inspiring facts of medical history than so much about the Chaldeans and King Tut.

Resolutions were adopted demanding a modification of the narcotic tax requirements, particularly the inordinate tax assessed in the name of the Harrison Anti-Narcotic Law against those who would relieve suffering by the use of the very necessary drugs included within the scope of the law. It seems that the officials in charge of the enforcement of this law claim that there has been no general demand for a reduction of the tax, and that the money comes in handy. It will be understood that the original tax was the nominal sum of $1.00, which was necessary in order to make the law enforcible. This amount was increased during the war, on the ground that it offered an additional opportunity for raising money for the prosecution of the war. The war is over, and most excess war taxes have been greatly reduced or abolished. The doctor continues to be imposed upon, simply because he has not objected. That is nice. *It is up to the doctor to do a little objecting.*

A demand, by resolution, was also made that the ordinary exemptions allowed a business enterprise under this income tax law, be likewise allowed in the practice of medicine. It seems that a merchant visiting the markets, either for purposes of studying the styles and the merchandise on the market,

or for the purchase of merchandise, may charge off his expenses in doing so, but the doctor who visits a medical society, or takes a postgraduate course, for the same identical purpose, may not do so. It is argued that the merchant spends his money in an effort to increase his income, from which the Government will profit, but the effort of the doctor is to increase his personal knowledge, which is a personal matter. The fact that his increased knowledge enables him to increase his income, is overlooked.

Changes in the By-Laws.—The most important change made in the By-Laws at San Antonio, was that increasing the annual dues. As has been said, this particular problem was debated at length, in executive session, in the light of the obligations of the Association and its opportunities at this particular time for service to the public, and to the medical profession. This amendment will be found on page 127 of this number of the JOURNAL. It raises the dues from $5.00 to $15.00, and leaves the method of expenditure of the additional funds thus to be accumulated, in the hands of the Trustees, as all other funds are, except the medical defense fund. While it is intended that the bulk of the increased income shall be devoted to publicity and educational efforts, it is recognized that it may not all be needed for this purpose, and the Trustees were left free to use the money as may appear best. It was anticipated that much additional expenditure could profitably be made, in increasing the opportunities of the Central Office to serve the profession and the public. There should be a permanent home, an extensive and well conducted library, and perhaps a publicity bureau, ready to offer service to the newspapers and lecturers to the public, at any and all times on any and all subjects; and an office force capable of handling the affairs of the Association with ease and dispatch.

In raising the dues, it was recognized by those debating the question, that there would be opposition, but it was thought that such opposition would largely disappear when it became evident what could be purchased with the money. It is the hope of all concerned that judgment will at least be suspended until the time arrives for the payment of the increased dues.

A new scientific section was added, to be known as the "Section on Radiology and Physiotherapy." This action was taken upon the request of the Texas Radiological Society.

Amendments to the Constitution increasing the Council on Medical Defense from four to five members, were offered and tabled, for action at the next Annual Session. This action was requested by the Council, on the ground that it could better distribute its members for service. At the present time the Secretary is in Fort Worth, the Chairman in Dallas and the other two members in Houston and El Paso. It is thought that a member in San Antonio would divide the territory to be served, to better advantage.

An amendment to the Constitution, providing for complete revision of the Constitution and By-Laws at any one session, providing the announcement was made at the preceding session, was introduced as a precautionary measure. In this manner it is hoped to make a total revision during the next Annual Session, and make the new laws immediately effective in all particulars.

The Commercial Exhibits at San Antonio were displayed in the lobby of the St. Anthony Hotel. Most of our old, tried and true friends were there, with some new ones. While we foster these exhibits for their educational influence, and the very nominal profit involved, and while the exhibitors primarily have in mind the advertising and sale of their products, the affair is really becoming more or less social. Many of us begin to look forward to meeting our exhibitors and looking over their wares, as we would old friends and old environments, when we begin to anticipate the Annual Session. Some of the exhibitors are almost as much a part of the State Medical Association as are the scientific sections. The following were present:

Fort Worth Surgical Supply Company, surgeon's and hospital equipment, Fort Worth. Represented by Messrs. Oscar L. Thomas, W. W. Clary, Heaton and Cockerham.

Sharp & Smith, surgical supplies and hospital equipment, Chicago. Represented by Mr. M. P. Whitten.

Johnson-North X-Ray Company, electrical apparatus and supplies, Dallas. Represented by Mr. C. W. Riggs and Dr. Frederick Johnson.

E. D. Prentice X-Ray Company, electrical apparatus and supplies, Dallas. Represented by Mr. E. D. Prentice.

Kelly-Koett Mfg. Co., *x*-ray equipment, Covington, Ky. Represented by Messrs. R. E. King, G. B. Schaefer and R. P. Kincheloe.

Waite & Bartlett Mfg. Co.

E. R. Squibb & Sons, manufacturing chemists, New York. Represented by Messrs. T. J. Farr, W. C. Iverson and W. W. Kelton.

Terrell Laboratories, The North Texas Pasteur Institute, rabies exhibit, Fort Forth, and *Terrell's Supply Company*, Fort Worth. Represented by Mr. H. M. Bulbrook.

Horlick's Malted Milk Company, Racine, Wisconsin. Represented by Mr. L. C. Soule.

Hanovia Chemical & Mfg. Co., Newark, N. J. Represented by Mr. Hartley.

Medical Protective Company, Fort Wayne, Indiana. Represented by Mr. Ed V. Freeman.

F. A. Hardy & Co, manufacturing opticians, hospital and surgical supplies, Dallas. Represented by Messrs. E. B. Smith, J. Hugh Campbell, R. L. Wilson, John Wyche, H. C. Rees and E. M. Brooks.

Radium Chemical Company, Pittsburgh, Pa. Represented by Mr. G. H. Loftus.

E. H. McClure Company, surgical and dental instruments and supplies, Dallas. Represented by Messrs. E. H. McClure, W. M. Steele, P. B. Grubbs and O. Coffman.

W. B. Saunders Company, medical and surgical books, Philadelphia Pa., and *J. A. Majors Co*, medical and surgical books, New Orleans and Dallas. Represented by Messrs. Geo. Henser, M. R. Shubert and Dr. J. A. Majors.

Morris-Freeman Company. Represented by Messrs. H. W. Freeman, E. A. Morris, B. Ingram and Bickett.

Victor X-Ray Corporation, *x*-ray apparatus and supplies, Dallas. Represented by Messrs. C. D. Collet, B. H. Doble, Fred Hofert and S. S. Linington.

Sommers Drug Store, San Antonio. Represented by Mrs. Anna Smith, Mrs. J. A. O'Brien and Mr. Wm. King.

W. F. Prior & Company, publishers of medical service, Hagerstown, Md. Represented by Mr. D. W. Stidworthy.

A. S. Aloe Company, surgical instruments, physicians' supplies, hospital furniture and bacteriological apparatus, St. Louis, Mo. Represented by Mr. T. E. Lawlor.

C. V. Mosby Company, medical books, St. Louis, Mo. Represented by Mrs. S. G. Cook.

A. P. Cary Company, surgical instruments, equipment and supplies, Dallas. Represented by Messrs. B. B. Hunter, G. L. Moore, S. P. C. Smith, J. M. Reeves and A. P. Cary.

McDermott Surgical Instrument Co., New Orleans, La. Represented by Mr. H. H. Pelton.

Publicity Campaign About to Begin.—The Council on Legislation and Public Instruction announced at San Antonio that the proposed publicity and educational campaign would be launched June 1. At a subsequent meeting, held in Fort Worth, it was decided to postpone this important event until June 24, in view of the interference of the Annual Session of the American Medical Association, June 9-13 and, incidentally, because the fund for defraying the expenses of the campaign had not been collected to the extent necessary to make a reasonably good start. The income provided for this purpose by the increase in dues, will not be available until 1925, and while the Council will probably borrow sufficient money to make good any unavoidable deficit, it was not deemed good policy to borrow too greatly from the future, the future doubtless having its own problems, which must be cared for in due time.

Request has been made of county societies to at once collect and forward to the State Secretary money already subscribed, and to secure such additional subscriptions as may be secured without imposition. This is nothing but right, in view of the money that has already been paid in and the obligations that have been incurred because of the prospects held out under the volunteer subscription regime. County societies have likewise been asked to nominate speakers for the Speaker's Bureau, and to advise as to the opportunities for public health addresses within their respective jurisdictions. Response to such requests has been thoroughly inadequate to date, but the Council hopes to carry out its plans notwithstanding.

If this movement is to be a success, and it must succeed, it will be necessary for the individual physician to exert his influence to the uttermost in its support, and particularly in the matter of securing of audiences.

Dr. Osborn Honored.—The Association of Ex-Presidents of the State Medical Association of Texas, during the Annual Session, took occasion to honor its perpetual and beloved Secretary, Dr. James D. Osborn, of Cleburne. A beautiful booklet was prepared, in recognition of his sterling character, devoted services to organized medicine and particularly to the Association of Ex-Presidents, and presented to him with suitable and affecting ceremony. In this booklet appeared the sentiments of each of the living ex-presidents, and each ex-president received a copy. The demonstration was conceived and carried out by Dr. Frank Paschal of San Antonio. The JOURNAL desires to add its word of praise to that of those special friends of Dr. Osborn, who have thus sought to honor him, and it is felt that the love and affection of the entire medical profession of Texas is his for the taking.

Preserve This Number of the Journal.—Each year we publish an additional supply of the June JOURNAL, in view of the surpassing importance of its contents. Generally we run out of surplus copies very promptly. There are a variety of causes for the extra demand. The membership list, for one thing, is usually desired for a number of purposes. The Transactions are likely to be needed at any time. The original articles included are usually of considerable interest. Whatever the reason for the demand may be, the fact remains that the edition is necessarily limited, and when it is exhausted, it is like the little fellow said, "That is all there is; there ain't no more." We trust our readers will salt this number away, for future reference.

ORIGINAL ARTICLES

MEMORIAL ADDRESS.*

BY

H. W. CUMMINGS, M. D.,
HEARNE, TEXAS.

This meeting is held for the purpose of paying a tribute of respect to those members of our profession whose names have just been read, and who have during the year passed to their reward.

Should time permit, it would not be my desire on this occasion to speak in a personal way of each of these, our friends and fellows, for I am sure those who have known them more intimately are better qualified to measure their individual worth and estimate their service. Might I not do them more praise and would I not more fully meet their desire (were they able to give expression) if I speak of them collectively, and refer rather to the influence of the doctor for good in the public welfare?

The service that these physicians have rendered has not differed greatly from that of other true and worthy physicians. It is true that some have had greater advantages by way of preparation, and some greater privilege of laboring in larger fields, but they have had common experiences and rendered a common service. We are living today in an era of civilization when a man's worth is measured not so much by his accumulation of material wealth, but rather the amount and kind of service rendered his fellows. According to this standard, I feel safe in saying that no class of men exceed the medical profession in promoting the general welfare, and none render a larger or more unselfish service.

The lawyer has ranked high in men's estimate as a public benefactor, and a moulder of public sentiment. We are glad to give credit to his wisdom in helping to establish this great government of ours, as well as to recognize his patriotism and influence in maintaining our ideals and principles. The ministry has always been an important factor in establishing the principles of religious freedom in the hearts of men. Ministers of the Gospel have by precept and example aided men to live righteous lives and encouraged them in Christian activities.

The doctor's work affords a varied opportunity for service to men. He holds a closer and more confidential relation to those whom he serves than do others. His professional contact gives him a more accurate knowledge of the physical and material needs of men. By this close, personal relationship he wields an influence for good in the every-day life of those with whom he deals, not only in guarding and directing their physical welfare but in shaping their characters and forming their ideals of life. Thus the opportunity to see men's needs and the appeal to render aid, is a part of the daily life of the doctor; and no class of men do a larger portion of that type of service described by the Master in the parable of "The Good Samaritan."

Again, the doctor as a co-worker with other classes and professions, exerts no small influence in shaping the opinions and moulding the standards of the public at large. In every community the doctor is one of the leaders in civic, political and religious movements, that have for their object the advancement and betterment of the people and the promotion of their material interests.

In addition to sharing the community's general interest, the doctor's professional training equips him for a special service—that of protecting the public health and prolonging human life. This part of his work requires an unselfish spirit, for the wider he extends his service the greater becomes his personal loss, because his essential needs and that of his family, come as a result of treating the sick, while the control and prevention of disease reduces his financial reward. Yet he gladly responds to humanity's call, and has always given a large part of his thought and time toward the lessening of disease, without hope of other reward than the consciousness of a work well done.

While the statesman, or the soldier, who succeeds in rendering public service is known of all men and is acclaimed by them as patriot or hero, the doctor sits unobserved in the laboratory, seeking the causes of disease and studying the methods of prevention that he may successfully attack man's common enemy. Who rendered the greater service to the world in connecting the Atlantic with the Pacific, thus increasing the commercial intercourse of nations, those who built the Panama Canal, or those sanitarians who, under the leadership of General Gorgas, made the building possible? Unknown, except by a few of their compeers, are those who, under the leadership of Doctor Walter Reed, freed this Southland of ours from the scourge of yellow fever, which prior to their labors had each year cost millions in wealth, and had taken, as additional toll, the lives of thousands of its best citizens.

Like the leaders in other fields of investigation, almost every year the doctor has added achievement to achievement in checking the ravages of disease, prolonging human life

*Read at the Memorial Exercises of the State Medical Association of Texas, San Antonio, April 29, 1924.

and giving man a better opportunity to develop and enjoy the hidden resources of God's universe. Numerous instances of great outstanding service by the doctor could be mentioned, but it is not the greater gifts that secure for him the love and respect of the people, but rather, the smaller deeds rendered each day as he goes in and out of the home, where not only sickness, but often poverty and sorrow prevail.

The world's Great Physician did not undertake to establish a world-wide health crusade, but as He went among men, finding them suffering in body, mind or spirit, He touched them and healed their infirmities. He gave sight to blind eyes and strength to withered limbs, and restored reason to deranged minds. To them all, He gave spiritual light, fitting them to live and serve.

As it was in the days of the Master, so it is with the doctor today. He uses his knowledge by teaching men to stay well; he gives honest advice to those tempted to do evil; he comforts those in sorrow and aids those in distress; he holds up a high standard of personal living, and renders the greatest service to man as a public benefactor.

I feel safe in saying that such a life was in a large measure lived by those to whom we, tonight, pay tribute. While no tablet of stone may mark their resting place, their lives will leave a lasting impress, and they will live long in the memory of those whom and with whom they served.

THE PREVENTION OF DISEASE AND THE SAFE TREATMENT OF THE SICK.*

BY

A. C. SCOTT, M. D. F. A. C. S.,
TEMPLE, TEXAS.

In casting about for a subject suitable for discussion upon this occasion, it was very tempting to drift into a line of thought which would permit a pleasant review of the early history of the healing art, leading up to a recitation of the wonderful achievements in the cure of disease and the astonishing prolongation of life attained by the science of medicine during the last four decades.

There is, however, an apparent need for more light upon the present state of affairs touching the health and lives of five million people in Texas, most of whom are sadly in need of information which may further protect them from disease and dangerous imposition. I have, therefore, chosen for my subject, "The Prevention of Disease and the Safe Treatment of the Sick."

A conservative estimate, made from the meager statistics compiled in our State Health Office, together with the average death rate in the registration area of the United States, indicates that in Texas thirty thousand persons die annually from preventable or curable diseases. The number may exceed this considerably. It is well that we should give most serious consideration to the meaning of this mortality. We may better appreciate the meaning of it if we will observe that the avoidable deaths represent a rate of five hundred and seventy-six persons per week, or eighty-two persons daily.

If for only one year these deaths were restricted to one city or town for a week at a time, and rotated between San Antonio, Houston, Texarkana, Dallas, Fort Worth, Wichita Falls, El Paso and on to the smaller towns, taking toll of five hundred and seventy-six persons in each place, until fifty-two towns had been visited, the public would comprehend the meaning of it and would not go on, as at present, heedless of the existing dangers and unconcerned about a subject more vital to them than the fate of the Democratic or Republican party, and which should be more absorbing than the congressional investigations of graft among government officials, and more disturbing than the warning of Japanese envoys regarding our immigration restrictions. Indeed, warnings such as have been given by the medical profession in the past would not so often be considered too stale to make news items. The people would rise up and in mass meetings demand information from every available source in efforts to avoid such dangerous visitations to their homes.

As the facts stand, the avoidable deaths are so scattered over the state that they are looked upon with complacency born only of ignorance, which alone accounts for a sense of security in the face of danger. Just here may I ask what home is safe from the danger during the next twelve months of tuberculosis, diphtheria, small-pox, typhoid fever, cancer, or any of the other preventable diseases?

For a period of several years, I have given much thought to the subject of the unnecessary loss of life from disease, and how it may be prevented or greatly reduced, and I have come to the unequivocal conclusion that three things are necessary for the successful prevention of disease, and in general the safe treatment of those who are sick:

First, an increased proportion of well educated and carefully trained doctors,

*Presidential Address, State Medical Association of Texas. Read before a General Session, San Antonio, April 29, 1924.

properly encouraged and protected by enforcement of the law;

Second, a State Health Commission, or Board of Health, created by a constitutional amendment on a secure, efficient and permanent basis, with sufficient power to function to the highest degree, and

Third, an enlightened public.

The alleged Chinese custom of paying the doctor only while his patient is well, has an element of good in it, but it is based upon the presumption that doctors are not honest in treating the sick, for when they get sick the pay stops. The custom does not possess that element of trust which characterizes the employment of private physicians only when sick, a custom prevalent throughout the civilized world. It carries with it the inference that a doctor can prevent disease independently of the peoples' assistance, a suggestion that the doctor has much more power over disease than he actually possesses and the suspicion that if paid only while the patient is sick, he might prolong the sickness to his own mercenary advantage.

In our own country we have an entirely different situation, one which indicates an abiding faith in the physician's integrity, a childlike confidence in almost anyone who is called "Doctor" who claims to have some special healing power, who boasts the possession of some remedy of unusual value, or who, perhaps, exhibits some pet theory of disease which looks plausible to the uninformed.

While a very large part of the medical profession of America deserves the confidence reposed in it, it is regrettable that this very public trust has furnished attraction for unscrupulous persons of mercenary instincts to enter the field of scientific medicine, or to choose a short cut to the healing art by adoption of some easy cult, which ignores or denies all scientific knowledge, and allures the afflicted by the proclamation of something new, something extraordinary, perhaps an alleged new discovery—a cult which entices by the exhibition of glittering promises, and decoys by easily obtained testimonials, which, if not wholly or partly false, are misleading, because the persons giving them seldom, if ever, have any dependable knowledge of the behavior any given disease if left to nature without any treatment whatever.

The existence of numerous cults in America, with no less than a dozen in Texas, including two or three with religious pretentions, and a large number of incompetent but *legally* qualified medical advisers, constitutes the chief obstacle to the successful prevention of disease and the safe and sane treatment of many of the sick.

The Texas Legislature has undertaken to provide that there shall be only competent advisers for the sick, by restricting authority to treat them to those who have sufficient knowledge of the human body and the diseases with which it may be afflicted to understand what they are doing when they assume responsibilities which might mean the preservation or loss of life. The people have not understood the sane action of the Legislature in this matter, and have not been cognizant of the fact that such legal provisions have been made for their safety and, as a consequence, they have been rather indiscriminate in the matter of whose advice they accept. They have, therefore, neglected to demand the enforcement of, and have ignored, a law which is perhaps the most important in the statutes of Texas.

This law, known as the Medical Practice Act, provides for intelligent care of the sick by licensing only those who have proven, by certain tests applied to all alike, that they have at least the minimum amount of knowledge which will warrant them in undertaking to treat the sick. This is a just law, permitting any honest person, man or woman, white or black, to avail himself or herself of its provisions, if he or she wishes to treat the sick intelligently and safely; a law which does not in the slightest degree attempt to limit or direct anyone regarding the kind of treatment to be selected, requiring only the possession of the knowledge necessary to diagnose disease. This being shown, the law removes all restraints and sets the licentiates at liberty to do anything not criminal which may be permitted by the patient. Such a law, when properly understood, and when enforced by the people, will constitute a distinct force in the reduction of deaths from curable communicable and preventable diseases.

To the old axiom, "Knowledge is Power," might well be added, "Knowledge is Safety," in its application to the preservation of health and the saving of life from premature destruction by disease. It naturally follows that the degree of safety in the advice given by anyone, is in proportion to the amount of knowledge possessed by the individual who gives it.

Knowledge concerning the anatomy, physiology, chemistry, pathology and bacteriology of the human body, and the behavior of the diseases with which it has to cope, has been accumulating for many centuries, and to acquire a sufficient amount of it to make one a safe adviser regarding the prevention of

disease and safe to treat the sick, requires years of preliminary preparation, and not less than four or five years of intensive study under instructors who have likewise spent many years acquiring such knowledge in accredited colleges and high standard hospitals.

Texas now has for the care of its five million inhabitants, not to exceed thirty-nine hundred active, competent doctors, who may be considered safe advisers. The American Medical Directory, together with the membership roll of the State Medical Association, reveals the fact that there are six thousand doctors in Texas, at least thirty-five per cent of whom may be classed as incompetent. To this number may be added at least several hundred grossly incompetent impostors, followers of various cults, who ignore the law, disregard all scientific discoveries and brazenly deny the existence of diseases, or ascribe all diseases to one cause, dogmatically expounding one theory to account for all, and then, either ignorantly or wantonly, advise that all diseases can be cured by their one remedy, regardless of cause.

Some of these persons, through the advertising columns of the press, and others in certain religious gatherings, are constantly appearing before the public, giving incompetent advice, dangerous to an extreme because they boldly deal with communicable diseases, such as tuberculosis, diphtheria, typhoid and scarlet fever, venereal diseases, contagious sore eyes, cancer, itch and even smallpox occasionally, before its eruption appears and frightens them into stepping aside to permit the attendance of a real doctor. The followers of such cults cannot comply with the sanitary laws which require communicable diseases to be reported, because they cannot with reliability make diagnoses, and they studiously avoid letting a real scientific physician be called before the whole neighborhood is exposed to infection, or before the patient has passed all possibility of scientific relief.

The evil of such incompetent advice is not limited to communicable diseases. Because of the inability of the advisers to diagnose or distinguish one disease from another, they are responsible for a procrastination beyond all possible chances of recovery, in cases which would otherwise have been curable.

No physician is infallible, and doubtless many diseases are improperly diagnosed by those who are generally competent. Sometimes a physician makes the error of underestimating his patient's resistance to a disease which appears to be hopeless and predicts an unfavorable ending. In the event such a case falls into the hands of a follower of one of the cults, and recovers in spite of the physician's mistake, and regardless of the impostor's brazen claims and ignorance of disease, the incident is pronounced "a remarkable illustration of cure," thus supposedly proving the infallibility of the impostor's claims.

Nothing could be more misleading and harmful to suffering humanity than individual testimonials of alleged cures, often given by persons of good intentions, who are ignorant of the nature and behavior of disease. Such testimonials are used by mercenary persons who are willing to warp the facts and trifle with human life purely for gain.

Many communities of our State are facing shortage in the supply of competent doctors. Our two medical colleges are running to their full capacity, but owing to the long time required to educate students to the point of making them competent in dealing with all manner of diseases, and owing to the increase in population, which is out of all proportion to the increase in competent doctors, a serious problem faces the State, which must soon receive the careful attention of thoughtful citizens.

While, by reason of the high standard of education demanded of doctors by the law, the State is gaining in the percentage of highly educated and well trained doctors, it is failing to apply the standard to all alike, through the enforcement of the Medical Practice Act. By this neglect the public is aiding and encouraging the unscrupulous to practice under the guise of some cult, and by permitting such competition, with all its deceptive practices, many high type, studious young men are discouraged from entering medicine, and undertaking a study which requires such long and arduous preparation.

The Legislature acted wisely in setting a high and equitable standard for all who would qualify to practice the healing art, and it is difficult to understand the stupidity of those legislators who persist in trying to add amendments to the Medical Practice Act, or pass some special law which would permit some cult to set for itself a lower standard of fitness gauged by some pet theory of treatment. The fact that the Medical Practice Act makes no mention of treatment is utterly ignored. That it establishes a sensible standard of education, and leaves everyone who meets that standard free to chose any kind of treatment he sees fit is overlooked.

AN EFFICIENT STATE HEALTH DEPARTMENT.

Next to a highly competent medical profession, the State most needs, for the suppres-

sion and control of communicable diseases, a stable State Board of Health, or rather, a State Health Commission. Such a commission should be as carefully selected, and in the same manner, as are the members of the Supreme Court of the State. By long, overlapping terms of service, it should be made free, so far as possible, from fluctuating political influences.

It seems impossible for any body of laymen to understand the magnitude and urgent need of fighting for human life. The correctness of this statement is demonstrated by the fact that the last Legislature appropriated the sum of $146,467.00 for the entire health department, upon which rests the chief responsibility for fighting human disease. The same Legislature, for the same period, appropriated the sum of $264,500.00 for the Live Stock Sanitary Commission, the chief responsibility of which is the fight on diseases of our hogs, cattle and sheep.

If I may be indulged, I suggest that, to reach the highest degree of efficiency, there should be created a commission composed of not less than five different kinds of specialists, or ten highly educated and well trained physicians, working in teams, one always ready to assist or, if need be, capable when in conference of "checking up" on any possible weak points or idiosyncrasies of another. Practically speaking, the field of preventive medicine would be well represented in a State Health Commission composed of two internists, two neuropsychiatrists, two ophthalmo-oto-laryngologists, two surgeons and two public health sanitarians.

The whole responsibility of selecting a competent State Health Officer and of supervising the work of a State Health Department, should be placed upon such a commission, and by constitutional amendment such vital and far-reaching work as that of protecting the lives of the people should be sustained by a fixed income, created by a small permanent tax, which would provide a fund sufficient to maintain a first class State Health Department, and, if need be, cover a large part of the expense of our eleemosynary institutions, such as providing proper scientific treatment for the insane, deaf, dumb and blind and other wards of the state.

AN ENLIGHTENED PUBLIC.

No argument is needed to show that disease cannot be prevented or treated safely, without an enlightened public.

In this progressive State of Texas, many people are as ignorant regarding the nature and usual behavior of disease as are the inhabitants of the Fiji Islands, and it should be recognized that many of our people, educated in high schools and colleges, to say nothing of the uneducated, secretly possess superstitions becoming of the days of witchcraft. It is almost inconceivable that in this enlightened age, many people believe that warts, which are temporary growths, and may be removed by conjury; that spontaneous recoveries from rheumatism are due to a pewter or silver ring worn on the finger, or a potato or buckeye carried in the pocket. The same sort of mind prompts the individual to hesitate to start any important journey, or difficult task, on Friday, to knock on wood when conscious of boasting about some achievement or supposedly good luck. These are the people who are most easily misled by incompetent advisers. But there are a surprisingly large number of highly educated persons who, having been previously misinformed, and having accepted a false premise regarding the cause and likely termination of a disease, are easily led into most erroneous conclusion regarding the curative value of a remedy, or the competence of an adviser. It behooves everyone to inquire more carefully into the scientific training and educational qualifications of those with whom they entrust their lives.

The public should know that the term "medicine" has two meanings. One pertains to medicines administered, the other having no reference to drugs, but in a broad sense referring to the entire group of sciences having to do with the human body, and the diseases with which it may be afflicted.

The "Practice of Medicine" is in no sense limited to treatment by the administration of drugs, and to refer to a regular doctor, one who is educated in the entire science of medicine, as a "Medical Doctor," is to exhibit undue ignorance. It is sometimes done maliciously, by the incompetent or their supporters, for the purpose of emphasizing the somewhat popular belief that real doctors are limited to drugs in their treatment of disease.

The public should know that by reason of nature's protective processes, many diseases are self-limited and tend to spontaneous recovery, and that real doctors do not pretend that they cure all cases which recover under their care. They freely admit that their services are not needed in some cases, and that in others they can only be of service in aiding nature. By early and intelligent diagnosis, they may be of greatest value in warding off or meeting dangerous complications, or by prompt recognition, save life by preventing the spread of communicable diseases to others.

The functions of a real doctor are, to prevent disease, cure those diseases for which curative means are known, aid nature, when possible, and relieve suffering by any means consistent with the safety of the patient. On the other hand, the incompetent medical adviser has no general education, covering the sciences which have to do with the human body and its afflictions. He proclaims some one theory to account for all diseases, and then argues that he has a single remedy or special system of treatment which he cunningly applies, with slight variation, to all cases alike. When he finds that his "dope" is not catching enough business, he usually takes up something about which he knows little but with which he can easily deceive the credulous. Electric machines, serums and bacterins, all of which have limited merit in the hands of competent doctors, are particularly adaptable when the popularity of an imposter's favorite scheme begins to wane.

The friends and boosters of imposters, as a last resort, argue that if their treatment or pet theory, guaranteed to cure, does not cure it will at least do no harm. There never was a greater mistake. Many "guaranteed cures" are positively dangerous, and in many diseases anything which causes delay in reaching an intelligent physician, may deprive the patient of his only chance for recovery.

It is better to prevent than to cure. Regular doctors do not put in their time boasting about the cure of disease, though they could truthfully do so in a very large number of diseases. Their greatest efforts are to understand and diagnose diseases, and to properly advise people regarding sane management, or prevention, where prevention is possible. To accomplish most in the prevention of disease, and the safe treatment of the sick, the public must be educated on a broader basis, and they need it now, to reduce the unwarranted mortality which may touch any household any day. Doctors cannot force this education upon the people, but they are willing to teach when occasion presents.

I am more convinced than ever that satisfactory education regarding these matters, which are most vital, will come best through first educating large groups of people, who are accustomed to thinking in big terms for society. Such people, properly organized and assembled at regular intervals, should have intensive instruction regarding all things necessary for the prevention of disease and the safe care of the sick. It is impossible to educate five million people in a decade, or a quarter of a century, but it is not impossible to educate, within a short time, the large groups of the most intelligent people in every community, who do the thinking. The best method of doing this is yet to be determined.

This, I believe to be the profoundest duty ever faced by the medical profession, and I have the utmost confidence in the ability and willingness of our doctors to perform this duty when the way becomes clear to them.

THE PRACTICE OF MEDICINE A LAY PROBLEM.*

BY

WAYNE DAVIS,
SAN ANTONIO, TEXAS.

Since receiving the invitation to speak to you upon this occasion, I have wondered why I was selected. I have had no special training which would qualify me to discuss in cold and scientific terms, a question of this character. I find myself in somewhat the position of old Uncle William Gray, who lived on the Minuhuilla Creek, near Goliad, where I was born and raised. He was just an old fashioned negro—a white man's darky. Everybody liked him. He was a prominent member of the Free Missionary Baptist Church, out on the Creek. All went well until one day, in an argument with a negro neighbor, Uncle William let off the wrong end of his shot gun, in a fit of anger and the neighbors performed the sad rites of planting his late adversary. Uncle William was arrested and placed in jail.

So it came to pass that Uncle William's friends at the courthouse were called in to help save him from the penitentiary. They decided they would file a charge of lunacy against him, and that would save him from the penitentiary. It would be easier to get out of the asylum. So, in due course of law and procedure, Uncle William was tried and convicted of being a person of unsound mind, and sent to the asylum, here in San Antonio. After a time, Uncle William was discharged as cured and sent back to his home in Goliad. But before he left, he insisted that one of the physicians give him a letter to the effect that he was a person of sound mind, which was done, and Uncle William came home and took up his old life again.

And so the summer days came, and the darkies of the Free Missionary Church held a great camp meeting. All the backsliders came back and everybody was happy. When the meeting was over, the members met to elect deacons and other officers of the church, for the new year. Some sister got up and nominated Uncle William for a deaconship.

*Address, delivered upon invitation, before a General Session of the State Medical Association of Texas, San Antonio, April 30, 1924.

Everything was silent for a moment, and then one of Uncle William's ancient enemies arose to his feet and said, "Brethern and Sistern, I doan wanter hurt nobody's feelins but I jest says you all know Uncle William's done been convicted as a pusson of unsound mind, here in the cote house, and you wanta think about dat 'foe you 'lect him an officer in de church, bekase dis is de Lawd's vineyard we is wurking in and we don't wanta bring no discredit on his work."

The speaker had hardly hit his seat before Uncle William was on his feet. Running his hand in his coat pocket he brought out the letter written by the asylum physician, and he said, "I'se got a letter from de head doctor of de State of Texas saying I'se a nigger of sound mind. Is any of you country niggers got a letter from any doctor saying you'se got any sense at all?"

And so I've wondered why I should make this talk when I know so little about it, while so many of you have degrees and letters from the big doctors saying you know all about these things. I have come to the conclusion that certain friends of mine among the physicians of Texas, thinking I had no better sense than to bluntly tell you the truth about it, arranged to have me speak. If my conclusion is correct, in accepting the invitation I have assumed a responsibility, and as there can be no responsibility without a duty, that duty I intend now to perform, insofar as I have the strength of mind and body to perform it.

There can be no argument against the fundamental truth that the average citizen is vitally interested in the problems of medicine and in the character of the individual who stands between him and the diseases menacing, not only his own life, but the lives of those about him. But the public does not seem to be alive to the danger of the hour. The people are not interested enough in the question of the prevention and treatment of diseases to study and to solve it.

We can divide this thing we call public interest into two kinds, active and inactive. The history of our people proves this fact. The American people were, of course, interested in their national defense, and yet they allowed our nation to drift into the most horrible war in the history of the world totally unprepared to play the great part in it we were forced to play. By reason of our unpreparedness, countless thousands of American boys, in our homes and hospitals, must now live the war forever. Can we say that the American people were not interested in their national defense? No! They were interested. But they were interested in so many things; they were so busy in the rush of their everyday lives that they did nothing about it until some great force prompted them to action.

Take immigration. Are our people interested in a question so vital to our National life? Shall we continue to throw open our gates for the unfit—morally, physically, mentally and financially, the ragged ends and the bob-tails, the outcasts of other nations? Shall we longer tolerate the foreigners gathering together in certain areas of our great cities and there, upon our money and under the protection of our flag, having their foreign goods, schools, newspapers, businesses of every character—all operated in a foreign language; in short, living in America, but still living true to the standards of their own country, and teaching their children, born upon American soil, to speak a foreign language and to pattern their lives after the ideals of a foreign country—no matter how contrary they may be to the ideals which, through years of faith and practice, have become the ideals of the American people? Are our people interested in the fact that our last Legislature appropriated only three and one-half million dollars for higher education, while it was forced to appropriate nearly nine million dollars for the socially unfit, for the same period of time? Nearly three times as much money was spent in Texas in caring for our insane, our feeble minded, our physical wrecks and our criminals, as was spent for our institutions of higher education. Are our people interested in the fact that our war records show that over 20 per cent of the men within the draft age who were called to the colors, were unable to read and write the English language, and that more than 25 per cent were physically unfit for service? Of course the citizenship generally is interested in these questions, but like every other important subject, the people must be educated to the idea of taking some definite stand for action.

Let's assume, as a fundamental truth, then, that the average citizen is interested in your side of the question, which is the prevention and scientific treatment of diseases, and that when properly aroused by some kind of an educational campaign, he will be stimulated to some action. With this as a basis, I will take myself as an example of our individual citizenship, and proceed to make out a case. We will say that I am sick, and in need of professional advice and treatment. How am I to know that the individual practitioner I see is the proper one to call? I leave my home and go to the main business part of the city. I read the signs on the office windows:

"Dr. Jones, Physician;" "Dr. Brown, Surgeon;" "Dr. Green, Osteopath;" "Dr. White, Chiropractor," "Dr. Red, Homeopath," etc. I am completely at sea. One man tells me one thing, another something else. A friend says, "See so and so; he cured me." One physician guarantees his service. Another, with boosters and advertisements tells a wonderful story of making the blind see and the lame walk. To say the least, I am a bit bewildered. Am I to be persuaded to try some new fad and to forsake the established profession which has served humanity for ages, with its recognized methods and from remedies for human ills, or shall I run the gauntlet of "isms" and take my medicine from the same old place? A sick man, crying for relief, will try anything to get well. Does a sick man stop to ask such question as, "Have you a trained medical mind?" "What is your education?" "Have you a license to practice medicine in Texas?" "Do you know normal men from sick men?" Of course, if one should find that a given practitioner a year before was the village ice-man, he would hardly risk his health in his hands; and yet, he generally waits until he needs a physician quickly before calling one—and it is then too late to start the educational inquiry.

So the laymen should not bear all the blame. We have a pretty good old public, after all. Credulous, easily imposed upon by crooks, of course, but its our public just the same. Some of you may not agree with me, but I remind you that Texas now has one of the best and safest medical practice acts in America. It was passed by the servants of the same public we have been speaking about, which demonstrates that the public is interested to some extent, anyway, and makes a strong presumption that, having passed such a law, the public will stand behind it. *It should be no more difficult to convict under our Medical Practice Act than it is to convict under the penal code.*

You might say that our officers won't enforce the law. Why not, then, perform your duty as good citizens? See that men are elected to office who *will* enforce the law. You doctors are strong enough to do anything you want to do—provided you want to do it badly enough. To my mind, as private citizens you owe to the public, more than any other class of citizens, the duty of educating the people to realize the danger of leaving the proven and scientific field of medicine for some new "ism" or fad. We do not hesitate to rush into the courts with evidence to convict the thief who steals a tire from our Ford automobile; why then should we tremble at the thought of convicting the thief who, through ignorance and for gain, steals the *health* and oftentimes the *lives* of our neighbors and our friends?

The enforcement of this law is in the hands of the citizenship. It is your duty as citizens to see that this law is enforced and that every quack and faker is driven from the confines of the State, no matter under what flag he marches in the parade. You should plant your feet upon the platform of scientifically proven medicine, for the relief of human suffering and, by the grace of God, you should never take them off until you have forced the imposters and the fakers to take their dirty, crooked fingers from the throats of the men and the women of Texas!

Why are you physicians so sensitive in regard to some of your civic duties? In every village and city you take prominent parts in civic enterprises. You serve your community, your state and your nation, as few men of any trade or profession serve them, and yet you seem to hesitate to launch a concerted educational movement to lead the public back to the paths of safety and of peace, in this all important matter of health. It is because you have no faith in the public? If you will only have faith, the public will not fail you. Faith is the strongest force in the world. The Bible teaches us that faith destroyed the walls of a great city. It was faith alone which saved the South to the nation; and it was our faith that right would triumph over wrong which won the World War and saved democracy for humanity.

I was born and reared in the South. All my training has been Southern training. Every impulse of my being is a Southern impulse. I have been taught from earliest boyhood that in this Southland, in the days before the Civil War, there lived the noblest race of women and the bravest race of men, the world has ever known. I remember the story of a Southern boy and the faith he had in his father. It emphasizes the simplicity and the beauty of faith so well that I cannot refrain from telling it to you now.

At the outbreak of the Civil War a young physician was called to the service of his country. He had arranged his business affairs as best he could, and at last the hour came for him to go. After kissing his wife and his little girl goodbye for the last time, he led his boy by the hand, down to the front gate, where a carriage awaited to take him away to the station. And there, he stooped down and planted upon the brow of his boy the father's kiss of love, and then he patted him upon the head and said, "Son, Daddy is going away upon a long journey. He wants you to be a good and a brave little man while

he is away, and take good care of your mother." Then after straining the little fellow to his breast, he let him down, stepped into his carriage and was driven away upon his journey. That evening, when the shadows of night fell around that saddened Southern home, and after she had rocked the baby girl to sleep, the mother called her boy to her side. He knelt and repeated aloud the old, old prayer, which has been taught to so many thousands of American boys and girls since first we've had this nation: "Now I lay me down to sleep * * *." After asking the blessings of God on his daddy, who had gone on the long journey, and the rest of the family, he raised his tear-dimmed face from his mother's lap and looking up almost into the face of heaven itself, said, "And oh, God, you needn't worry about my mama, I promised daddy I would take care of her."

Oh, you physicians of Texas! You with your boasted ideals of citizenship! You with your splendid record for service to humanity in peace and in war—why can't you take the public into your confidence and with the blind faith of this little Southern boy, put the hopes and the fears, the future safety and glory of your profession, into their hands. When you do this, you needn't worry about the outcome—the blessed public will take care of that. Get back to the old days! Remember the splendid history of your profession—the impressions written into the lives and the hearts of men by those gone on before. Who does not love the old-fashioned country doctor, whose love for his profession passes all human understanding; who, through summer's heat and winter's cold gives the best he has in him to the public he serves; whose life is dedicated to service, with no thought of reward, "unknown and unsung?" There are no implications of duty he would whittle or reject. Tender in his administrations to the sick, knowing not the difference between the rich and the poor, he journeys on through sunshine and through shade—a benediction to his people. With his light before you and with the proper faith, you need not fear to rest your case in the hands of the great public you serve so faithfully and so well.

Pituitin "S" (Surgical).—A slightly acid aqueous extract of the posterior lobe of the pituitary body of cattle, approximately six times the strength of Solution of Hypophysis U. S. P., containing 0.5 per cent. of chlorbutanol as preservative. For a discussion of the actions and uses of pituitary preparations, see Pituitary Gland, New and Nonofficial Remedies, 1924, p. 225. The preparation is supplied in the form of ampules pituitin "S" (surgical), 1 Cc. Parke, Davis and Company, Detroit.—*Jour. A. M. A.*, April 19, 1924.

THE RELATION OF THE PRACTICE OF DENTISTRY TO THE PUBLIC HEALTH.*

BY

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The contribution to things really worth while is the only true basis of credit. It is this productive type of individuals we need and must have if the world is to progress as it should. I consider human beings the greatest economic wealth, and health the greatest human blessing. Anything that offers freedom from pain, increased capacity for enjoyment and greater ability to serve, without increasing the expense of human existence or energy, I believe not only a physical blessing, but beyond question of great economic value. Therefore, good health is an economic as well as a physical blessing.

Ignorance is not a crime, but it is an enemy of humanity, and if the people only knew and observed the laws of health, a vast amount of potential energy and capital would be conserved, and their ability and usefulness increased many fold. Hence good health is an economic asset.

It is a fact that the very first and strongest incentive to action, the very highest emotion awakened in every normal human being, is that of protection and self-preservation, a desire for the continuation of life. The most essential knowledge is that which aids in the conservation and prolongation of life. I believe a vigorous robust health and its accompanying high spirits, are larger elements of happiness than any other thing. The most necessary thing for a successful and happy life, is to be strong and vigorous physically.

I am persuaded that the greatest menace to our country and civilization, is the character of manhood and womanhood we are producing. The strongest fortress any people or nation can have, is not a large army or great navy, but a stalwart, noble, happy manhood and womanhood, fully alert to their opportunities and responsibilities, and with a determination for civic righteousness and the execution of the laws of love, as laid down by the Master Teacher. This appears to be a digression, but I wish to emphasize the fact that with a healthy robust physique, the proper notions of citizenship are more easily inculcated; and the making of good citizens is certainly one of our duties.

It has been wisely said: "The education the world needs most is for good parenthood," but this can be realized only when good health

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obtains. Especially do I think this applicable to the mother; for to understand that in every boy and girl there are infinite possibilities for good, and to know how to actually develop these is to render both Heaven and earth the highest possible service.

If any part of the human body becomes diseased or suffers from any cause whatever, all parts are affected in relative proportion. This is not a theory or opinion, but an axiom, fundamental and inherent, and he who disregards it must inevitably suffer the consequences. Complete functional activity depends upon complete systemic integrity. Permit me to emphasize this statement, as it is of prime importance, for it is the cornerstone upon which the superstructure of health and physical manhood is builded.

Perhaps no part of the human body furnishes so fertile and fruitful a field for the incubation and propagation of disease-producing micro-organisms as the mouth, and in no other part is the opportunity for prevention of disease so great. But before a person can become the victim of infection, the infecting organisms must gain admission through some primary focus. The mouth, because of the conductility of its tissues, is often the site of this focus. The origin of systemic infection, in many cases, has been traced directly to the mouth. The neglect of the mouth, with decomposing food lodged therein and decayed teeth, with suppurating roots and gums, is not only a menace to health, but should be regarded as a serious condition; aside from the annoyance, pain and impaired mastication, systemic infection, septicemia and death have been the sequelae. If the public could be impressed with the need and the value of observing the laws of health, many ailments would be checked in their incipiency, or cut off at their very source.

The keynote of the hour in the healing professions is prevention, and no time is so propitious as childhood and youth, to put into execution this idea. The measure of resistance to, or immunity from, the ill effects of sepsis, is directly proportionate to the preponderance of forces of defense over those of attack; and this varies with health, and diminishes as age advances. Cases are on record where diseases have been contracted in early childhood, the organisms remaining dormant or inactive until a period of lowered vitality in adult life. Thus, people with neglected mouths may appear perfectly well until a strain from serious illness, when their true condition is learned, some of them passing into middle life before being punished. In many instances, it might justly be said that the mouth condition was a predisposing cause of the illness, and that old age was hastened by oral sepsis.

It is a fact that a large percentage of diseases from which people die, are contracted in childhood or youth; so if we would raise, or even maintain our present standards of civilization, we must look well to the children, as well as the adults, that they may be properly educated and developed. The process of education may be a slow one, and we may not live to see the goal fully reached, but "He only has failed, who has made no attempt." No one achieves the highest and best in anything without an ideal; and a vision of that ideal must be had and kept. The wise man said, "Where there is no vision the people perish." The education of the public thus far has only reached the sentinels of the great army of humanity. The surface of the soil has scarcely been scratched in the great field where the seed is to be sown. Every child, as well as adult, has the right to know, and should be impressed with the fact, that health, happiness and longevity depend very largely upon the perfect functioning of all the organs of the body, and this can exist only when the entire body is in a state of perfect health. As the bud needs the sunshine and the shower, to develop its flower and fruitage, so the child needs and must have favorable conditions and advantages, if it is to reach maturity and give to the world the most and best.

Every dentist, as well as every physician, should be an assistant public health officer of the community in which he lives; and it is his duty not only to assist in healing, but to protect the public from disease. It is also within his province, and it is his duty, to recognize and treat precancerous ulcerations, and other similar conditions he may find in the mouth. If, in dealing with these conditions, the dentist does not get prompt response, he should consult with a good surgeon, or refer his cases to the family physician, that they may be treated early. Serious lesions may occur in the mouth as a result of decayed, jagged teeth, faulty dentures, or improperly adjusted crown and bridge work; and it is the duty of the dentist to correct all such conditions. An irritated spot in the mouth should be considered as a red flag and not disregarded, as sooner or later disaster is sure to come.

No surgical clinic or hospital staff is complete (nor can its patients expect to receive the most and best that can be done for them) that does not have a dental surgeon on its clinical staff. There are two very important sources of infection which are found in the mouth, namely, abscessed teeth and roots,

and diseased gums; and from these a multiplicity of lesions may spring up. In a large percentage of the adult population, one or both of these conditions may be found, and so the dentist is an indispensable factor in the speedy recovery of the patient.

It is the concensus of medical opinion that a large number of tuberculous infections are acquired through the mouth, and the digestive tract, as well as through the nose and the respiratory tract. Little credence is now given to the theory that this disease is hereditary, though a child may inherit a weakness or tendency toward tuberculosis. We should wage war against this disease in its most dangerous age, childhood; and mouth hygiene and prophylaxis, as well as general hygiene, count for much as to whether or not the child becomes a consumptive. Decayed and putrescent teeth are veritable hot beds for the culture and propagation of the tubercle bacillus and the dentist owes it to the public as well as his patients, to destroy these hot beds. If the organs of mastication are not kept in good repair, digestion is impaired, and bodily resistance, which is so necessary in combating any disease, is materially lowered. Thus the battle may be lost. Good teeth, good food, good digestion and good assimilation, are potent factors of defense in combatting a predisposition to this disease, as well as fighting it after it has become active.

Dentists are not supposed to be expert dietitians, but they should know and be able to give advice as to the food elements required to build a strong healthy body, as well as a strong set of teeth. The methods of handling and preparing many of our food products, with consequent decrease of food values, has caused deficiency diseases to become exceedingly common, and malnutrition appears to be the rule rather than the exception. The factors which determine stature, physique, color of the eyes and hair; also, the shape of the teeth, are inherent in the cells from which the body develops, but the activity of these cells, and the factors involved, depend upon the soil in which they develop and the food they assimilate.

There are sixteen elements which are essential to our life and well-being; and I dare say the average meal eaten by the average American family, contains only a small amount of some of these and of some none at all. So wonderfully and generously has Nature provided these necessary elements, that one or more of them is found in all animal and vegetable foods, and even in the very soil itself, from which these animals and plants receive their sustenance. Thus the cycle, "Dust thou art, and to dust returneth." It is with an intelligence little short of divine that the roots of edible plants select from the earth those elements necessary to their growth and development, and elaborate them in physiological balance to form proper food for man. How pitiful, yes, almost tragical, that man, subject to the same natural laws, appears to have counted himself wiser than his Creator, and to have so perverted this food by processes called refining, that civilized people must pay the penalty of deficient bodies from early childhood, even to the very end of life. How can we expect to grow strong, robust bodies with a good set of sound teeth, when our cereals are, by the refining process, robbed of three-fourths of their mineral salts? No wonder tooth-decay and acidosis are so prevalent, when so many of these necessary body builders are extracted and cast off as refuse, or eliminated by modern methods of cooking and poured into the kitchen sink or family garbage pail! Our beautiful white bread, made from flour after the refining process, has been practically demineralized, and yet "bread is the staff of life." Such bread is a broken staff, to say the least of it. You can no more build a brick house without brick, than you can build a sound, robust physique, without the essential mineral salts.

If time permitted, I would like to go into detail with reference to special food for expectant mothers during gestation and such as are necessary to maintain lactation, that the integrity of the mother's health may be maintained and the child develop into a healthy, strong baby. This is of vital importance. If the mother is not sufficiently nourished by a properly balanced diet, the child may be affected throughout its entire life. Every baby should be breast-fed if at all possible. No child can develop its organs of mastication as they should be developed, when bottle-fed, to say nothing of the lack of the essential elements, which usually goes with bottle feeding. It has been said that the criminals of the baby's first year are rickets, scurvy and malnutrition, and that these are largely products of bottle feeding, especially proprietary food feeding, in which there is usually a deficiency in tooth-building, as well as body-building materials. The dentist has a responsibility here, but he usually puts the lion's share on the shoulders of the physician.

In the year 1911, Dr. Charles Mayo made this statement, "The next great step in preventive medicine, should be made by the dentist." More than twenty years prior to this, Dr. Miller, in an epoch-making speech, said, "During the last few years the conviction has grown continually stronger, among physicians

as well as dentists, that the human mouth as a gathering place and incubator of divers pathogenic germs, plays a significant role in the production of varied disorders of the body; and if many diseases whose origin is enveloped in mystery, could be traced to their source, they would be found to have originated in the oral cavity." So it would appear that a goat was needed, and the dentist supplied that need. How well he has performed his function, I will leave the medical profession to judge. The accomplishments of the dental profession, during the last decade, along the lines of oral hygiene and prophylaxis, will show that mouth infection has been fought with intelligence and determination.

This is, indeed, a day of prevention, and the dental profession craves the co-operation of the medical profession, at the same time believing that the physician needs the dentist, and that both need the co-operation of the public. Then we can make good. To accomplish the most and best, requires honest, persistent and united effort. We must be fearless, positive and conscientious, in our professional conduct. If we feel, after all possible facts have been obtained, that a certain line of procedure should be followed, then we must "hew to the line, let the chips fall where they may." Our statements and actions must bear the closest scrutiny of intelligent laymen, as well as our professional brethren, hence, must conform to the latest scientific standard. Our methods, at times, may be questioned, but when we see the kindling fires of future disaster, we must apply the most efficient fire-extinguisher at our command; we must not persuade ourselves that prophylactic measures will suffice, when anaphylactic conditions already exist. We cannot always determine the exact condition from a physical examination, but with laboratories at our disposal, and experts whom we can consult, we are negligent if we do not use them.

In conclusion, may I not insist that we take special cognizance of the child upon whom the duties of future citizenship rest? As scientific men and women, we must recognize the fact that at the moment of conception our control of hereditary characteristics ceases. We must, with few exceptions, deal with all alike. We cannot tell in early life the desirable from the undesirable; for from the palatial home may come the fool, and from the hovel may come the genius. So, by serving conscientiously and to the very best of our ability, we are serving well, and are weaving in no uncertain manner the social fabric of future generations. We are makers of history through our future citizens, and are thus doing our bit toward the advancement of civilization.

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SHALL WE HAVE COMPETENT PHARMACY?*

BY

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It affords me great pleasure, I assure you, to appear on your program. I bring you greetings from the Texas Pharmaceutical Association, wishing you a most profitable meeting and thanking you for this courtesy.

We frankly admit that there is room for considerable improvement in our profession. During the past years, a sordid commercialism has crept into our drug store management until, today, we are prone to wonder "Where do we go from here?" When the old familiar smells of iodoform and asafetida have been entirely superceded by the odor of chili and Mulligan's stew; when the prescription end of the business has been crowded into a nook, or chased into the balcony, to make room for plate lunch patrons, and when we see Self-Serve-Drug-Stores and Drugless Drug Stores opening up on every hand, is it anything to marvel if the public arrives at the conclusion that any store with the words, "Drug Store," "Botica," "Apotheke," etc., on the door, means a place to buy medicines, and that one is just as reliable as the other when it comes to filling a prescription? When the newspapers are full of advertisements of wonderful patent and secret remedies of all kinds, ranging from cures for lost virginity to kingdom-come; and when these very advertisements carry the recommendation and "money-back" guarantee of the largest drug-stores in the city, is it any wonder that physicians feel a bit slighted by the prescription department of this same drug-store! When the physician writes a prescription for "D. C. & Co.'s Original Bottle," at extra cost to the patient, instead of writing his own prescription for the individual, and when the patient sees the "blown in the bottle" trade-mark, is it any wonder that he asks the question, "Is that a patent medicine Dr. D. prescribed for me?" Or is it strange that the prescription is passed along from one patient to another?

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Lax professional conduct on our part has brought us face to face with a decision which must be made quickly. Shall we allow "Pharmacy" to drop from the ranks of time-honored professions, and become a name for a place to buy anything from a rat-skin to a ranch—a mart dominated by the spirit of commercialism and by those who have no thought whatsoever for the future of the profession? With bootleg drug stores and "Jake Joints" opening up by the hundreds; with regulation piling upon regulation in the Government's effort to cope with the situation; with drug stores owned and operated in flagrant violation of the law, by persons who make no pretense at registration, is it any wonder the ethical pharmacist becomes a nervous wreck in a very short time? With these conditions staring us in the face, the question becomes, not shall we have competent pharmacy, but shall we have any pharmacy at all? With this question burning in the minds of the leaders of pharmacy from one end of this country to the other, and with the advocates of better pharmacy thoroughly aroused, we *shall* have competent pharmacy.

What are we doing about it? Last year, the San Antonio Retail Druggists Association, with the material assistance of the San Antonio Drug Company, put on a "Truth Campaign," extending through the entire year, at a cost of approximately $20,000. This campaign was for the most part educational. The public was told that the druggist is more than a merchant, that he combines a professional service with his merchandise, and that he is registered by law for the specific purpose of protecting the public. The money was spent largely in calling the attention of the public to the fact that medicines should be bought through medical channels, and that prescriptions should be filled only by persons who are registered by law. This "Truth Campaign" has been copied or reproduced, in one form or another, in various parts of the country, with very favorable results.

In view of the lack of co-operation on the part of local officers, and the flagrant violation of the pharmacy law by those engaging in the practice without any pretense at registration, the Texas Pharmaceutical Association has placed a special officer in the field. This investigator has been on the job for several months. Complaints have been filed in almost every city visited. In some cases convictions have been secured, while we have failed in others, generally due to the laziness or indifference of the prosecuting attorney. However, we are going right on through with this campaign, and the fellow who operates a drug store contrary to law, will find that this is a Marathon rather than a quarter-heat.

The Texas State Board of Pharmacy, in conjunction with the National Association of Boards of Pharmacy, has raised the standards of the examination until the percentage of failures has risen to 85 or 90. The Texas Board proposes to revoke the certificates of any licentiate found guilty of violation of the Harrison Antinarcotic Act, or the Volstead or Dean Laws. There may be "Dumbells" practicing pharmacy in Texas today, but if the State Board of Pharmacy continues its present form of examination, the number of undesirables will not materially increase.

Our pharmacy law is good as far as it goes. While you of our brother profession require a premedical education before the medical course, and then an internship before practice, we are still clamoring for an amendment to our law, requiring our applicants to be graduates of a college of pharmacy before they become eligible to take our examination. This prerequisite we hope to obtain in the near future. As for laws, we are all agreed there are enough and to spare. What we need is law enforcement. It is said the American people make and break more laws than any other nation on earth.

Now, gentlemen of the medical profession, our professions (yours and mine) have been saddled with a business which has for centuries been considered a curse by some and a blessing by others. We did not seek the obligation. The responsibility was left as an orphan (illegitimate, perhaps), upon our doorstep. Our professions have suffered in the esteem of the public because of carelessness on the part of some of our brothers, and we must appeal to you and in all kindness call your attention to the fact that a prescription for whiskey cannot be filled unless some physician certifies, over his signature, that he has made a personal examination, and finds the patient in need, etc. I call your attention to the fact that the public judges your profession and mine by the weakest, rather than the strongest, of our ranks. I call your attention and our own to the fact that the public will not have more respect for us than we have for ourselves. The public is not going to think more of our profession than we think of it ourselves.

We realize the intimate relationship of the physician to the lives of the public. Appreciating the confidence you have placed in us as pharmacists, we solicit your co-operation in our efforts to enforce the pharmacy laws of this State. We do not ask you to direct your prescriptions to any special store, but when you turn a prescription loose and the

patient says, as is often the case, "Doctor, where shall we have this filled?" make your reply emphatic, that it must be filled by a registered pharmacist. In this way, with a little effort on your part, you will render us immeasurable assistance in our effort to enforce the pharmacy laws, weed out the unprofessional from our ranks, and arrive at a condition of competent pharmacy.

THE ROAD TO HAPPINESS AND HEALTH.*

BY

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In matters pertaining to health and morals, men are wise or foolish rather than good or bad. Living creatures are constantly engaged in adjusting themselves to environment. All human conduct is based upon this fact. If we are wise enough to live in accordance with the great natural laws that govern the universe, we are rewarded with good health and happiness. If these laws are disregarded, we pay for our mistakes in poor health and broken spirits. Lack of vision and understanding are responsible for all of our mistakes. Some one has said that in marching through life as best we can, we do not keep step with each other because we do not all hear the same drummer. James Whitcomb Riley made the hired man say:

"I believe all Childrens good,
Ef they'r only understood—
Even the bad ones—'pears to me,
's jes as good as they can be."

That is true of us all. In following a natural and proper ambition to be happy and well, we always take the road that seems to lead to happiness and health, but quite often we mistake the road. The thoughtless who are given to high living and low thinking, are no more wicked than are the whining poltroons who seek to avoid penalty for their mistakes, by praying for forgiveness instead of making an effort to right the wrongs for which they are responsible. Both are to be pitied rather than blamed. Their mistakes are due to lack of intelligence and to defective education. "As ye sow, so shall ye also reap," means nothing to their dull understandings. That "Nature never forgives an insult," and that "every cause produces its logical effect," have escaped their attention. Men and women who turn night into day, drink whiskey, pollute their minds from the literary garbage cans, filled with the writings of weaklings seeking to defend their own mental and moral perversions; and the young who are misled by the false philosophy taught in the moving picture houses, are no more wicked than are little children who step into the fire, or are crippled in the streets by passing vehicles.

The clergy and the medical profession are not performing their full duty when they content themselves with abuse for the wickedness of the unfortunate victims of lowered intelligence and false education. As leaders of men, it is their duty to discover causes and to suggest remedies. When fathers and mothers accept the theory that sane and decent living, in accordance with the laws of nature, means only restraint, sadness, gloom and the shouldering of unnecessary burdens, while on the other hand self-indulgence, idleness, sensuous dancing, gambling, drunkenness, and sensuous literature (including plays that mock the sanctity of the home), are proper entertainment for the young, it is time for leaders to do something more constructive than merely to declaim against the wickedness of the world.

If decent and proper living, with preservation of the home and the rearing of the young, is not on the road to happiness and health, it is both useless and undesirable that this life be held up to the young as ideal; and if ludeness, idleness and self-indulgence really promote happiness and health, it is improper to advise the young against such a life on the mere threat that they will be punished in the next world. The virile, adventurous young men and women of the country must be taught how to live, not how to die. They must be taught that it pays to follow the road to happiness and health, and how to avoid the gloom, sadness and tears that mark the road to ruin and despair. Both preachers and doctors speak too much of the pleasure-seeking youth and the "primrose path," and of the dangers that come from the happiness and joy dispensed by bootleggers, sensual dance promoters and degenerate literature. They speak of these things as if they *really* promote gayness and lightheartedness and freedom, and *really* lead to happiness, advising that they must be avoided because they are wrong, and because God will punish us for being happy. Why not teach the simple fact that self-indulgence, abuse of the emotions, the degrading of love and the good-fellowship of drunkenness, do not give any happiness at all, but from the very start and with ever-increasing cruelty, pain and disillusionment, despair and death—never happiness, and that the philosophy of right living, whether taught by Christ or any other great teacher,

*Read in St. Mark's Episcopal Church, San Antonio, April 27, 1924, under the auspices of the State Medical Association of Texas, as a part of an educational campaign to be conducted by the latter organization, in the interest of the public health.

brings from the start and in ever-increasing amount, health, happiness, joy and long life?

The problem can be solved only by a clear understanding of the plain lessons taught in that cold light of classified knowledge called science. A very superficial knowledge of the science of living things teaches us that man in the savage state, like the animals, as a matter of self-preservation and in pursuit of long life and happiness, is protected from hard and unkind environment chiefly by his intelligence, intuition, or common sense, supplemented in a small way by the limited knowledge that he gains from his own experience. For instance, guided by native intelligence alone, he is able to find his way through forests and over streams and to overcome the dangers from climate, famine and wild beasts, and the competition from equally wild men. Guided by instinct alone, he is able to safely reproduce his kind and care for his offspring, and to train his young to meet the problems of life. Civilized man, on the other hand, by faulty breeding and by neglecting the exercise of his instincts, is far less intelligent than the savages. Protected by safeguards and guided by intelligent leadership, he is able to survive. What he lacks in intelligence, he makes up for, theoretically, by improvement in education.

The factors that ultimately break down civilization are (1) the constantly lowering level of civilized man's native intelligence, (2) the constantly increasing burdens imposed by civilization, and (3) the defects that creep into his education. The savage, protected by instinct, does not overwork, nor neglect play or the contests that teach him to overcome obstacles; he does not turn night into day, nor drink whiskey, nor poison his mind with sex problems. He is guided by common sense rather than by fear and, consequently, is more comfortable in his physical being, is less nervous, and has a better body and a happier mind. His chief interest centers in his own physical welfare and the great natural urge to reproduce and rear his own kind. His simple home is the center of his life. Civilized man, because of his lowered intelligence and defective education, suffers from false conceptions as to what really constitutes happiness. He, therefore, engages in a wild and reckless search for happiness, and in the wrong direction, and too often finds himself on the road to ruin and disillusionment. He violates many of nature's laws which primitive man and animals do not violate. He injures his digestive tract and destroys the proper functioning of his body and of his mind. He makes idleness his ambition, notwithstanding the plain fact that idleness means rotting instead of growth. Everyone knows that when we fail to use an eye it becomes blind, or when we bandage an arm it becomes paralyzed, and that when the mind ceases to contemplate wholesome and healthy things, it becomes perverted and diseased, and yet idleness is made the ideal state for ourselves and our children. We develop an ambition to get away from home and the rearing of the young, and put aside the responsibility of being a father and the head of a family. In other words, we become degenerate, effeminate and unmanly. We lose our love for the simple and beautiful things in life. Women are no longer divine and beautiful, as the mothers of men. They become the playthings of our idle and sensual moments. Children are no longer the greatest blessing that nature can bestow, but a burden and a care, interfering with our moments of idleness and ease—and rotting. Women, following our example, cease to be modest and retiring and concerned chiefly with the idea of reproducing the future men and women of the race. They imagine that they see some higher and nobler calling ahead of them than the mere drudgery of the home and the duties of protecting and rearing the young.

To explain and apologize for the degenerate state of society resulting from the abandonment of home, modern poets, novelists and playwrights, devote themselves to producing erotic poetry, triangle problem stories and degenerate plays. Fortunately, as a weak effort to substitute something for the destroyed home-life, effeminate men and masculine women follow the leadership of the thin line of really intelligent and properly educated normal men and women who, apprehending the danger of the situation, organize and support such uplift movements as the Boy Scouts, Camp Fire Girls, domestic science training in schools, the teaching of right-living in the churches, the good health campaigns of the medical profession, and the rest. All of these are valuable and necessary under the circumstances, but none of them can take the place of home influences. There can be no good health or good morals in any community where home life is degraded and men and women cease to hold as their chief ambition in life the ideals of the home. The mother who seeks to fulfill her duties to society by organizing clubs, and yet fails to teach her daughter that the rewards of the world are for service, and what the punishment is for idleness and selfishness, is preparing that daughter for the road to ruin and disillusionment, including bad health and bad morals. The father who fails to function as head, protector and director of the home,

and accepts instead the role of a weak partner of a restless and misguided mate, must, of course, bear the chief part of the blame. From such parents come the restless, casual workers given to excesses, weakly avoiding responsibilities, holding the home and the rearing of children in contempt, while depending upon a false philosophy to explain their own failures. They lead the young of the nation along the road to ruin.

Many men of brains and character must be drafted from the narrow circle of the individual home to become leaders and fathers of the groups of homes which we call communities, states and nations. It is, of course, necessary that such men accept leadership of the herd, but the price paid is high, because these leaders cannot be real fathers in their own homes. The best stock is thus constantly giving way to that of weaklings.

The physician is often too much of a materialist and cynic. He neither accepts leadership nor prepares himself to lead. The teachers of religion concern themselves too much with creeds and dogmas, and take the position that they are commissioned to teach repression and to deal in threats, instead of pointing out the whole philosophy of Christ's teachings in the statement, "I come that ye may have life, and have it more abundantly." They fail to make it plain that Christ did not come to teach a religion based on fear and repression and gloom, but to point the way to happiness and health, and to increase the fullness and joy of life.

The greatest natural urge of any living creature is to reproduce and care for its young. A man who does not take this as an ideal, and who does not fight and struggle and sacrifice to attain that ideal, is not worthy to live in a cave with wild beasts. He is lower than a criminal. He is a degenerate. Real love does not mean anything to him. He can understand the tawdry imitation—the love of the moving-picture and modern novel. He can understand the alleged platonic friendship fake which makes him think that he can be a pal and associate on equal terms, with a woman not his mate. If he were not a degenerate he would know that so-called platonic friendship is apt to be smallpox masquerading as measles.

There can never be health and happiness where there is no real home. Without the ideals fostered in the home, there can be no understanding of the proper relationship of the sexes, and therefore no good health of mind or body. Love ceases to be the greatest dynamic force in the world when it is degraded to a mere maudlin sentimentalism, having to do only with external, and utterly devoid of spiritual quality. Modern literature, including plays for the stage and screen, by teaching the shallow sentimentalism of utter selfishness, is leading the young into forming alliances that from the very start spell tragedy. Real love develops and grows to full fruition only in an atmosphere of unselfishness and of real service. Love has nothing to do with paint and powder, with exposure of the person and with the infatuation born of drunken companionship and sensuous music. It is subjective and casts a halo about its object. Its degree and quality depend upon the character of the one who loves. There has never been a great love that has not carried with it the desire for home and children. Great love never takes into account money, palaces, yachts, automobiles and fine clothes. Love asks nothing and gives all. No real man has ever truly loved a moving-picture queen, or the heroine of a triangle play, or any other woman who did not share with him the ideal of home and children, who did not offer him the challenge of complete devotion and the need for protection. Externals do not influence real love. The loved one is always without fault and never grows old. Circumstances do not alter, nor does time destroy the charm. Romance is indeed the key that unlocks the door to eternal youth. The alleged love, born of drunken companionship, or desire for riches, or for any external thing, has nothing in common with real love. Compare, for example, the love affairs depicted on the screen or in modern novels with the great love between Lord Nelson and the frail but feminine Lady Hamilton. There was tragedy and dramatic interest enough in this affair, and surely enough to criticize. However indefensible that alliance may have been, it furnished the inspiration which enabled Lord Nelson to rise above his physical handicaps and inspired him with the strength and courage and faith that made him master of the seven seas and, perhaps, the greatest naval hero of all time. No writer of the modern novel or moving-picture scenario could ever rise to an understanding of the divine love that inspired the poems that Browning wrote to the broken cripple he made his wife. The love that has created all the great poetry and literature in the world, that has won all the battles, that has inspired strong men to be steady and firm in adversity, and that has made them the conquerors of men, has been born of the devotion of real mothers, and of the wives and sweethearts who have asked nothing but to love and to make sacrifices on the altar of that love. There can be no real love in an atmosphere of suspicion and doubt. The atmosphere of sensuous music, triangle plays and the com-

panionship of drunkenness is saturated with suspicion and doubt. There can be no happiness nor good health nor good morals in the world without real love, and there can be no real love that is not spiritual and free from selfishness.

THE SERVICE OF MEDICINE.*

BY

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I am reminded by the struggles of your distinguished President, of a very obese judge who was presiding over a very real banquet in St. Louis. His dearest friend sat on his left and had already been introduced and had spoken for forty minutes. The verbal momentum was continuing, and the bilateral innervation of the hypoglossal nerve to the lingual muscle was running at full speed. The speaker on the right was not his personal friend, but was next on the program for a ten-minute talk. He stood this onslaught of language for forty minutes; his head then nodded, he then slept, and then snored. The toastmaster was very indignant that anyone should not listen to his dearest and most distinguished friend, even if he had spoken for nearly fifty minutes, and he tapped with no uncertain purpose the gentleman on his right, on the back of his bended head. The gentleman slowly awoke and more slowly raised his head, and then more slowly turned it to the left to the toastmaster and said, "Hit me again; hit me harder; I can still hear him." (Laughter.) All of which means I shall try to be brief.

I do not believe that any man understands the problems of us who call ourselves physicians. Kipling wrote his "On the Road to Mandalay," and he talked of the Burma girl whom he knew was thinking of him, and he used this feeling expression: "I walk with English housemaids from Chelsea to the Strand, and they talks a lot of lovin', but law! what do they understand." We have our individual problems, whether we be in the army or in the navy, or in the general practice or in surgery, or in public health work, and they talk to us, but law! what do they understand? I think the best evidence of this happiest and holiest of subjects, the service of medicine, is medicine itself.

We men who call ourselves physicians on the land and on the sea, on shipboard and in war, in the classroom, in the field, in the home, in the hospital, in the operating room, in the office, and "what do they understand?" We belong to a chosen people; we are leading, it seems to me, with great humility of spirit, the human race to a confirmation of that promise that "I, if I be lifted up, shall draw all men unto me." No man can run a train without medicine; no man can run a ship, no ship can spread a sail without medical inspection, and every regiment must have its doctor, and every brigade its chief surgeon, and every division and every corps and every army. Stonewall Jackson had his Hunter McGuire; the Texas regiments had their physicians.

There are three great medicines, the medicine of cure, the medicine of prevention and the medicine of function. Ninety per cent of us, surgeons, practitioners and internists, belong to the medicine of cure. Just before he died, Alan Seeger wrote his poem of the English soldier's death, "I have a Rendezvous with Death." We physicians have a rendezvous with life, and we keep it to the best of our ability. The best proof of our service is that our religion is the duty of the day's work. We do it and sleep as best we can, and rise again to do another day's work. Our friends, the surgeons and internists, read their statistics of a thousand cases or two thousand cases, and they spread their science and the service of their art; but there is another point of view, the suffering of the patient. You remember that old quotation, "Of one blood made I all races that dwell upon the surface of the earth;" it might be easily transposed to read, "Of one blood made He all races to suffer upon the face of the earth." If there has been anything marked by mass and by wholesale qualities it is pathology. The old Greek words "pathos", disease, and "logos," science or treatise, were united and we had pathology. We belong to that branch of medicine—curative medicine. Only the public can tell of its service.

There is another division, a new science, which is just coming over the horizon of human thought, the science of preventive medicine. I do not believe we, even, understand it yet. I believe in the future it will be the greatest of human sciences. Some day in the generations to come, there will be no cancer, because to some research student, toiling tediously with Nature, Nature shall yield her secrets. Thus all of our incurable diseases of today shall be cured.

There is still another function of medicine —another service, which can best be summed up in the word, "Protection." Our great function, apart from our science and our art, our cure and our prevention, is protection. We protect in ways we know not how—that, every speaker on medicine gives utterance to; we protect with prophecy, and we lead. We are all familiar with that marvelous

*Delivered by invitation before a General Session of the State Medical Association, San Antonio, April 30, 1924.

quotation, "He leadeth me beside the still waters." I suppose each physician who goes into a home, leads the uneasy inmates of that home beside stiller and more peaceful mental waters, as relates to their loved ones. We are scientists and artists and prophets and friends, all in one. Some day, some man with the gift that Shakespeare had, will rise and write of the Service of Medicine.

THE MEDICAL PRACTICE ACT MUST BE SUSTAINED.*

BY

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It is a truism that "No man liveth to himself, nor dieth to himself," therefore, such essential problems as relate to the pursuit of happiness, the possession of liberty and the preservation of life, are never individual problems.

Human experience has demonstrated that individual necessities can be most surely met and individual aspirations most certainly attained, through agreed combinations rather than by single efforts. It is upon this theory that families, communities, states and nations, have been organized. In order that the purpose of organization could be realized it was necessary to determine certain principles, according to which rules for the settlement of property rights and regulations to control personal conduct, were to be formulated.

It is a sound principle of government that, representing as it does the entire citizenship, its machinery should provide at least the opportunity to acquire such rightful benefits as the citizen himself cannot so surely or so conveniently secure.

However sound in principle legal enactments are, there must be a general approval and a disposition to observe them on the part of the majority before they can be made permanently effective, and there must also be penalties sufficiently strong to compel observance by such as are not actuated from patriotic motives.

Regulations pertaining to the public health, or as to other functions of government, are based on the general principle of the "greatest good to the greatest number," a standard of accepted excellence. They are, in fact, more inclusive, since there are few if any who at some period of their lives may not need their aid and their protection, such regulations are of vital interest to all.

In the exchange of products, honest weights and measures are required and for the ordinary course of commerce are property rights carefully described. For a violation of one and for infringement upon the other, graduated penalties are assessed. In this way culprits all the way from the confidence man to the plunderer, must answer to the State according to its standard.

Life, the most sacred of all human possessions, has been safe-guarded by the most stringent of our laws. All good people are agreed upon the wisdom and justice of laws which protect the lives of citizens against such assaults as may be made from impulse of anger or those impelled by criminal intent. The courts of the country are diligent; jurors, as a rule, do not hesitate to inflict severe penalties, and public opinion is ready with its applause.

Since human life is sacred, it must have governmental protection, regardless of the source of danger. Reckless discharge of firearms across a neighbor's premises and maintenance of unsanitary conditions calculated to injure the health of a community, are prohibited on the same principle, and rightfully so. The State recognizes that certain diseases are contagious in character and demands that those who have them remain separate from other citizens. Because this precaution quarantine laws have been established, and few persons of intelligence contend against them. Through the operations of the quarantine, such diseases as measles, scarlet fever and diphtheria, are limited, to a large degree. In dealing with smallpox the patient himself is quarantined as soon as the disorder is recognized and in addition, such persons as have been exposed to the contagion are vaccinated, or restrained.

It is now known that tuberculosis is not an inherited disease, but that it may be contracted by one who has not even a known predisposition, by intimate contact with a sufferer from the malady, and no disbelief on the part of the sufferer himself, his family or his friends, can act as a passport beyond the limitations which the State imposes.

These references apply and a few enumerated instances illustrate, the comprehensive field of public hygiene and preventive medicine, all the claims of which are susceptible of proof so definite and conclusive that well-informed persons do not question them.

As the science of preventive medicine has progressed, under the searchlight of scientific research, and clinical observation, certain diseases have been conquered, many make their appearance less frequently, and such as

*An address, delivered upon invitation, before a General Session of the State Medical Association of Texas, San Antonio, April 30, 1924, as a part of a general educational and publicity campaign to be conducted in the near future by the State Medical Association.

do appear, are more easily understood. The microscope, test tube and other laboratory equipment, have discovered the causative factors in most of them, and such knowledge has added greatly to the probability of their cure.

Before these methods were available, or so perfectly developed as in the last three decades, the causes of many diseases were necessarily speculative, and therefore the treatment applied was more or less arbitrary and varied, in accordance with the viewpoints and the conclusions reached by individual observers. This gave rise to many divergent opinions, and these differences in opinion gave rise to a number of medical sects, so-called schools of medical thought, but while each of them held to different theories regarding methods of cure, all of them which possessed sufficient scientific bases to deserve survival and legal recognition, have at all times been in agreement concerning certain fundamental principles of unquestioned truth.

To illustrate, Christianity holds as fundamental the omnipotence of God, the inspiration of the Scriptures, and the divinity of Christ. Due to differences in respect to church policies and scriptural interpretations, a number of denominations have developed, but whether Catholic or Protestant, the test which determines what churches have a right to call themselves Christian, does not relate to individual tenets or doctrines, but to the question whether they adhere to the three great fundamentals which underlie the Christian religion. A man may pretend, he may even conform, but if he does not believe that the Almighty is the great creative force, that the Bible is the word of God, and that Christ was His divinely appointed Son, he is not a Christian, regardless of his claims.

As Christianity applies to the spiritual lives of men, so the medical profession seeks their physical security. Its fundamental principles from the standpoint of reason are not more subject to conjecture. These fundamentals are: Anatomy, the human body at rest; Physiology, the human body in healthful exercise; Chemistry; Bacteriology; Pathology; Obstetrics; Surgery; Diagnosis, and Public Hygiene.

Scientific thinkers from the days of Hippocrates until now, have recognized these principles as the essential foundation of all scientific systems of practice. Persons or cults who, whether as individuals or organizations, either ignore or deny them must be regarded as a conglomerate mass of infidel opponents to scientific medical progress in the rational treatment of disease, and therefore enemies to society.

The sick citizen should have a safe adviser, and in order to avoid failure in this there should be some method by which relative safety can be correctly determined. For the exercise of this function on the part of government, precedents are numerous and principles are established.

Our teachers are examined to determine whether they have information equal to an agreed academic standard. Lawyers must pass an examination to prove their competency to administer our courts. Lighting systems must be supervised in their construction, as a safeguard against electrical hazards, and even the plumber must in his work obey rigid regulations. Transportation companies are required to know that the man who guides the engine of a railroad train has had suitable apprenticeship, and particularly that his eyes have been tested for color-blindness. Otherwise, there could be no safety for passengers or freight. The green signal, which means "Go ahead," and the red signal, which cautions "Danger," cannot be distinguished by a man who is color-blind.

The medical profession as it is today, like other progressive institutions, "worthy and well qualified," is a product of the ages.

Savage tribes revered their medicine man as one anointed. The primitive root and herb doctor found materials for his remedies by searching the fields and the forests. The old-school physician described in the literature of both fact and fiction as also the family physician of the later period, was of most rugged character and deservedly the best loved of men. Representatives of these several types "served their day and generation" to the best of their ability "by the help of God." They bridged as best they could the interval between then and now. They lived when conscience was above commercialism and when righteousness was the rule.

If all men were equally honest and were today possessed of equal intelligence, only those would offer themselves to treat the sick, who are competent to do so, but in this department of human endeavor, as in all others of which we know, the human element has entered and must be reckoned with. Unfortunately, all men are not equal in intelligence and many intelligent men are neither industrious nor conscientious. Therefore, public policy demands and has demanded that a proper standard should be established.

The first effort made by this State to determine the qualifications known to be necessary was a very imperfect one, the district board. Under its terms the judge was authorized to designate three reputable physicians to examine applicants for license to treat the sick and injured in this State.

The natural first appointment would be his family physician; the second, some doctor who had aided his ascent to office; the third, one who could be depended upon to assist in the subsequent election. However competent and careful such examiners desired to be, those coming before them were, as a rule, the sons of neighboring families or from some other circles where sympathies were apt to become a factor. Therefore, decisions could hardly be called judicial.

This system, the district board, was supplanted by one which, while more pretentious, was not without its glaring defects. The law provided for five examining boards, each having its own standards and each having equal authority to issue licenses, and practically nobody failed, since the one offering the easiest facilities became the most popular. Multiple standards mean next to no standards at all, and, as is always true, when the high and low are in existence, the low standard prevails.

Recognizing the incompetence of this system of "multiple boards," seventeen years ago by agreement among the leaders of the five so-called schools of medicine, the three boards were consolidated by law, which consolidation had the following basis: The Governor to appoint one board, non-partisan, in that its members were chosen from the existing legalized schools of medicine and in such a way that neither should have a majority representation over all; examinations to be on the fundamental branches only, and no questions asked as to plan, methods or details of treatment; examinations to be in writing, with papers numbered and ink signed, so that the identity of applicants and the school from which they come, remain unknown until after the results are announced; persons obtaining a license from this board to be permitted to treat the sick by any method dictated by professional judgment.

No fair-minded person has urged an objection to these provisions, since they work no hardships upon anyone who possesses intelligence enough to understand, and industry sufficient to accomplish worthwhile endeavors. It did not, of course, contemplate perfection, but it was as nearly ideal as it seemed possible to make it. It did not guarantee that physicians who qualified under it should be equally competent. No legislative enactment could do this. Neither the State nor the profession can endow a man with superior intelligence, or add skillfulness to his equipment, but the ignoramus can and will be barred, men guilty of grossly immoral practices can and will be ex-communicated, the hopeless drug addict must surrender his license, and the public can and must be protected by law from ignorance and its attendant evils.

A diploma from a reputable medical college is a prerequisite, and neither the graduates from the regular, homeopathic, eclectic, physio-medic or osteopathic schools, have complained of the requirements, nor have they sought to evade them. For the most part, they have been young men, whose idealism has been aided by the four years association in scientific atmosphere. There has been added to a commendable conscience already possessed, a higher ambition to serve humanity. In the event of failure to pass the examination, they have either returned to college for further instruction or, as has occurred, have abandoned the calling in favor of some vocation found to be more suitable.

Occasionally some practitioner whose training has not prepared him, has been found to possess no license, or to have a diploma which he claimed to have earned but which in reality had been issued to some one else or, equally reprehensible, that bogus and spurious kind peddled by diploma mills. Diploma mills have no defenders, and they are usually short lived. Undergraduates making false claims are properly discredited by summary justice. Deception on the part of those who dishonestly claim scientific qualifications, is not tolerated either by the courts or public opinion. For seventeen years this law has been respected by the virtuous and has controlled the weak, but all over this State, during all this time, there are two classes of persons who have flagrantly violated it, and nobody seems to care.

The two cults which have been the most notable offenders are, the Christian Scientists, or rather, the professional "Healers" among them, who claim that there is no such thing as disease and yet charge for the neglect incurred by these "treatments," and Chiropractors, who admit that people do get sick but insist that all diseases are caused by faulty alignment of one or more of the spinal vertebrae. These cults have nothing in common, except their antagonism to righteous regulation, and their disbelief in the proven facts of science.

But for the fact that through the seductive influence of the Christian Science theory, and the salesmanship feature of the Chiropractic curriculum, much popular notice and some popular approval, has been attracted to these cults, no individual mention would be made of them. Many well-meaning and apparently intelligent persons, have been deluded by Christian Science. Many of these are among our very best people. They are our neighbors and friends, and since they hold to the doctrine which the faith so in-

sidiously inculcate into the minds of its followers, they are apt to be sensitive concerning any critical reference to what is assumed to be their religion. The fact is, that so far as the cult shall claim to be Christian in character, independent of Science, there should arise no issue. Had it originated and remained in the domain of the spiritual, no comment lacking due consideration would be made, but the term "Christian," which contains the carrying power of the cult, has been associated with the term "Science," an act which may be denominated "assumption" or "presumption," at will.

For the purpose of this discussion, we separate Christian Science as a devotional exercise, and Christian Science as a secular calling. As a devotional exercise and a religion, it is a personal and private prerogative of its devotees, and is entitled to the same guarantee of religious liberty which the government universally accords, but that guarantee is accompanied by another, equally well-established, that no religious society shall be given privileges or protection peculiar to itself.

The theory of the medical practice act is that Christian Science as a religious denomination has appropriate immunity, but that Christian Science as a secular calling is the people's business, and since it has insinuated itself as an offered substitute for the science of medicine in the treatment of disease, it is subject to legislative inquiry and regulation. Therefore, it should not and cannot escape, searching analysis.

Do people get sick? If they do not, why the stereotyped question asked by your friend every day, in his solicitude for your health? If not, why the anxious homes, where loved ones lie ill and our dear ones suffer? Why the larger and smaller sanitariums and hospitals, devoted to the care of patients and the cure of disease? Why the crepe around the arm of a neighbor, or upon his door, and the mortuary reports in every morning's paper, following the wails of anguish from broken hearts. Why the new made mound, marking the too early resting place of infancy and childhood—of our strong manhood, taken from our professional and business circles, cut off in the prime of life?

The term delusion, previously used, is a considerate one, the most charitable possible under the circumstances.

Christian Scientists call illness "Error." It is lamentable that their teachings, through literature and other methods of propaganda, is the fatal error that it is. It is particularly unfortunate, and deplorable, that the results which follow do not fall alone upon individuals primarily responsible. The cult Christian Science, instils into many a false belief. It tells the sufferer from cancer that what he complains of need not kill, when everybody knows that it is the most fatal of all maladies, when not apprehended early and appropriately treated. Cancer almost never kills at the point of attack. Vital organs take on the disease through the blood or lymph streams, and it is only before this takes place that it can be cured. Skin cancer is curable by the *x*-ray, when treated early. Delay calls for disfigurement and death. A woman with a lump in her breast may have the lump excised and live, or she may delay a year or two and become hopelessly afflicted with cancer.

Before the discovery of antitoxin, the larger percentage of all children stricken with diphtheria died within a few days. The proper administration of that remedy today restores 98 per cent to health and happiness.

It is serious enough that propaganda of such criminal character cannot be controlled, but surely even if we must permit it as a tenet of religious faith, the State should not ignore its responsibility by becoming an accomplice.

Public policy demands ultimate discouragement. A child in the average family in which the "errors" of Christian Science have not found lodgment, complains of feeling badly and is not sent to school. An educated physician is called. He discovers the symptoms of scarlet fever, the sick child is cared for and the pupils of the school are not exposed.

Another child in a home pervaded by the delusion of Christian Science beliefs taught by the healers, makes the same complaint and is assured very lovingly that an "error" is responsible. It is sent to school and many children who come in contact contract the disease. Some of them die!

Let adults ignore either from ignorance or delusion, if they must, but the medical profession will not fail to do its duty in the premises, and the State cannot continue its partnership in the crimes committed in the name of Christian Science, which has sought to protect itself by an association which is misleading, fallacious and death-dealing through delay.

In so far as Christian Science inculcates patience, tolerance and self-serenity, it is altruistic and helpful. The principles underlying these attributes are not subject to patent, nor can they be pre-empted. They are those which underlie our better sentiments and are inseparable from the best philosophy. Whatever there is of value in them is in reach of all persons who are normally adjusted, and the wise physician makes use of mental suggestion every day.

Fear disturbs equilibrium; doubt encourages disaster. The troubled mind is an enemy to sleep; sleep is nature's method of repair. Distress destroys appetite and lessens the power of resistance; digestion must precede assimilation, and assimilation is needed to insure physical resistance. There is some truth in all error that floats, and this is what there is of truth in Christian Science.

I have no objection to prayer. I wish I had the advocate with the Father that some people claim. Having been reared in a minister's home, and having enjoyed throughout life the atmosphere of rational religion, I commend prayer as a devotional exercise in all reverence, and when christian scientists, or others, lift their souls in prayer and supplication to the Almighty, in a spirit of devotion, I bow my head in the same spirit, however unworthily. But when they, or others, prostitute such prayer at the behest of avarice, for personal gain, I must be excused if I lose interest in them and their prayer. Religious prayer is one thing, commercialized prayer quite another, which public sentiment should not condone nor the State countenance. The law prohibits the treatment of disease for pay, and applies to Christian Science healers just as to other practitioners.

The cult Chiropractic, is approached in an entirely different attitude. It has neither the grace of veneer nor the glamour of mysticism. Its pretenses do not include pride, and in its ignorance all facts are easily discovered. Having neither that idealism which induces men to deserve rather than desire, nor that educated intelligence which inspires to consecrated purpose, nor that industry which is necessary for the serious pursuit which is called for in the scientific world, they route themselves by indecent haste through a near cut to professional status, and hold themselves out to be "Doctors." If the medical profession had no other motive except the maintenance of its self-respect, that alone would justify it in resentment. But this is not the serious consideration.

The medical profession, by tradition and employment, is interested in the prevention and cure of diseases. It recognizes that sanitary and quarantine laws are only effective when administered by persons familiar with their principles and practical effects. It understands and is impressed with the fact that the diagnosis and treatment of disease present problems that are very difficult and that no mind, however educated, can cope with them any too well. It certainly is true that there is no vocation or calling in which sympathetic friendliness and dauntless courage are more in demand, but neither of these splendid exhibitions can gain for the sick man all that he requires in his extremity. The physician must understand both disease and the patient. First, he must understand the human body, at rest and in action. These are covered by anatomy and physiology. If he is ignorant of bacteriology, he is uninformed as to the causes of many of our commoner and more fatal diseases. If he has not a working knowledge of pathology, he cannot comprehend the changes which disease makes in the human body. If he does not know chemistry, time would be lost in case of either intentional or accidental poisoning. The parturient woman, the most patriotic of human kind, ought not to pass through her travail unattended by someone more familiar with her physical mechanism than she herself. Disbelief in the germ theory of disease will not protect her from infection due to careless handling; nor can physical deformity be remedied by either prayer or spinal adjustment.

Chiropractors claim that all diseases are caused by dislocation at the spinal juncture, and that the better treatment of all cases lies in readjustment. How utterly ridiculous! This dogma denies the necessity for diagnosis, upon the ground that no matter what the disorder, the same treatment will apply. Denying that disease-producing germs influence health, they resent the suggestion that bacteriology is scientific and true, and ask to be excused from its study. Assuming that all conditions are easily curable by their pet methods, they wish to avoid post-mortem study necessary to know pathology. In short, no knowledge is of importance except how to twist and where to bear down.

Surely the salesmanship equipment, which appears to be the major subject of their schooling, must be extraordinarily developed, to enable them to sell such senseless suggestions to any considerable part of even a gullible public.

A man takes his watch to a jeweler and tells him it is out of order. The jeweler, without opening the case, assures him that only one thing ever happens to a timepiece, namely, that the mainspring sometimes gets out of adjustment. The owner of the watch, thinking along straight lines regarding property, takes his watch away and does not return.

An automobile is driven into a garage, with the request that the engine be looked over for some difficulties that are not understood. The mechanic assures the owner that only one thing ever happens to an automobile engine, that the carbureter sometimes

gets out of adjustment. The owner looks at the mechanic and says, "Say, young man, I have seen my radiator leak. I have had ignition trouble, have heard my cylinders pound, my differential grind and the universal joint go bum. Are you trying to be humorous, or are you a plain fool of the type to which we sometimes refer when more or less profane?"

The average citizen is sensible when he considers property, and in all business enterprises he wants each proposition clearly stated, and insists that stated facts be accompanied by positive proof.

It is not clear whether inherited superstitions or a misunderstanding regarding the nature of illnesses and injury, can account for the mental attitude which protects propagandists of such arrogance. Surely the sunlight of investigation can dissipate the mists and mysteries which cloud the mind. Surely the application of reason will destroy misplaced confidence in the minds of all except the supercredulous.

The purchaser of a gold brick admits himself a fool. He is a marvel of wisdom compared to one who refuses to reason regarding matters pertaining to his health and the prolongation of his life.

Everybody knows that the malarial parasite induces malaria; that the typhoid bacillus causes typhoid fever; that the tubercule bacillus must pass into some part of our anatomy before consumption takes hold; that diphtheria is caused by the diphtheritic germ, and so through a long list of veritable diseases and veritable causation, calling for veritable cures.

Men now living remember when yellow fever sacrificed many lives throughout our Southland, leaving the people panic-stricken. Cholera at one time destroyed the inhabitants of whole islands, making it necessary to repopulate by immigration. Cuba and other West Indian islands, were once unsafe places in which to live, because endemic diseases kept civilization away. The Panama, once prohibitive from the same cause, is now a garden spot in civilization.

During the war with Spain, typhoid fever killed more American soldiers than were destroyed by the bullets of the enemy. In the meantime, vaccination for typhoid has been discovered, and during the greatest war of all history there was not a serious outbreak of typhoid in any American camp.

Christian Science "healers" and Chiropractic quacks, appear before each succeeding Legislature as special pleaders. Their contention is, that since they do not give drugs in any form or use chemicals in any way, they do not practice medicine, although they admit and claim that they should have the right to treat disease. The "Healer" desires the legal right to charge the sick citizen for the treatment of disease, which he piously asserts does not exist, and chiropractors wish to have license to treat diseases which they cannot diagnose, giving as an excuse that diagnosis is unnecessary. Christian scientists claim exemption for their "healers," or, perhaps better expressed, the "Healers" themselves dodge behind an assumed virtue which they call "religion," in their plea for immunity. It is one of the purposes of this campaign of popular education now to be launched, to tear the mask from one of these cults and drive the other out in the open, where its extreme nakedness will inevitably be discovered.

When Christian scientists say they do not practice medicine but merely "heal" the sick by prayer, and when chiropractors say that they do not practice medicine because they do not prescribe but only manipulate, such statements are already controverted by the most primary evidence and the most conclusive testimony. Standard dictionaries define Medicine as "The healing art; the science of the preservation of health and of treating disease for the purpose of cure, for financial remuneration." The courts of final review have handed down decisions in this and other states, in exact corroboration. No competent lawyer and no presiding judge has been found who holds to a different opinion. The language of the Medical Practice Act, which has been enforced in this State for many years, is, "It shall be unlawful for anyone to practice Medicine by any method whatsoever who has not obtained a certificate of license from the Texas State Board of Medical Examiners to do so and who has not filed the same in the county of his residence." It is, therefore, undisputable in the light of the plain wording and the interpretation of the courts, that such Christian Scientists and Chiropractors as have been following the calling of advising persons "for the preservation of health" or "treating disease for the purpose of cure," have been practicing medicine within the meaning of the law, and that such as have done so without first obtaining licenses have been practicing in open violation of the law. Therefore they are lawbreakers and, to say the least of it, when they next appeal to the State for any sort of recognition, they should come with clean hands.

The question naturally arises, why have these people been permitted to continue to

hold the law in contemptuous disregard? We admit that the situation is anomalous. Many of our laws are repeatedly violated, such as theft, boot-legging and burglarizing, but we have not observed any of these types of law-breakers boasting of their crimes.

For seventeen years the law has been defied but the last Legislature revised the Medical Practice Act by adopting certain amendments, which amendments so strengthened it that only popular approval is required for its enforcement.

Just before, and during the last legislative session, there was a limited effort made to enlighten the people concerning the issues involved, and to impress upon the House, the Senate and the Governor, the wisdom of "putting teeth in the law," so that it might be more easily enforced. This the adopted amendments did, and when prosecutions begin, as they will shortly, the nominal fine and the few hours in jail will not be the limit. The ultimate penalties are now commensurate with the crime. Jail sentences can be made long enough for convincing meditation, and the injunction feature of the law will prevent the courts of the country with their crowded dockets, from spending their time uselessly.

There is something else to be done with the tax-payers' money, yours and mine, than to spend it prosecuting chronic criminals.

The Medical Practice Act will be approved by the people, as it was by their representatives at Austin, when they have had the same information upon the subject; and knowing, as we do, the necessity for its enforcement, and the benefits which the people will derive from its enforcement, we have a plain duty before us. Unthinking persons may misconstrue our motives, and ungenerous men may charge self-interest, but neither shall divorce us from our obligations.

The law, to become effective, must be understood; to be properly understood, the reason for its existence must be known. If this reason is to be explained, those who are most familiar must do the imperative job.

This is the philosophy of the campaign of popular education on public health matters, the paramount issue being the Medical Practice Act, which is to begin the 19th day of June. It will be state-wide in character, and the most approved plans of publicity will be utilized.

The medical profession has too long pursued a course of unwise and unnecessary isolation. In order to remain distinguished from the patent nostrum vendor, from mountebanks and charlatans, who, lacking in reputation must depend alone on notoriety, the profession has avoided and otherwise discouraged publicity, particularly in newspapers, but we can no longer ignore this vital avenue of approach. We shall never exploit ourselves, either as individuals, physicians or surgeons. Neither of these things could be done without violating the proprieties of gentility and a sacrifice of our self-respect; but there is no reason why the ignorant pretender and the boastful bigot, should have a monopoly in the use of this medium for reaching the people with wholesome information concerning matters in which they and we have a common interest.

And there is no doubt at all about the preservation of the law. It is certainly safe in the immediate future. The next Legislature will be overwhelmingly favorable, since many of its friends either remain or will be returned, and quite a number who opposed the legislation previously, have come to view it with better understanding. For instance, the Dallas delegation in the last Legislature were not unanimous for the bill; but each of those who will be re-elected have expressed themselves as being now satisfied, and as desirous of seeing it work out without obstacle or interruption. This commendable patriotism is being evidenced in many sections of the State.

Each candidate for governor who has a ghost of a show to be elected, has cheerfully committed himself to the principles we advocate, and the same is true with a number of other applicants for state offices.

Christian Science as a church will probably be satisfied with the provision that permits prayer for any purpose so long as it is not commercialized, and the "Healers" unsupported by the better element of the faith, will not command a hearing.

Chiropractors will come with their usual paid help, to plead for a separate board upon the illogical and already disproven contention that they do not practice medicine. The State will answer their requests for a separate board composed of themselves, to make inquiry as to their knowledge and ability to manipulate the spine, by informing them that the State is not interested in their knowledge of any method of treating the sick, until it can be shown that the parties who intend to apply the treatment know something of the sick man himself, and the diseases which they are supposed to treat. When they plead exemption from examination in bacteriology and pathology, on the grounds that they do not believe in the truth of these sciences, the State will reply

that it does believe in the truth and the essential importance of these sciences, for if it did not it would cease to appropriate money from the public treasury to equip laboratories in which they are taught, and to pay instructors for teaching these branches. In other words, it would close the Medical College at Galveston.

In this campaign we shall make it clear that it is not our purpose to drive anyone out of the practice of medicine, but that we insist that those who do follow the profession shall properly qualify.

The law of supply and demand will control in this department of human endeavor as it does in all others, and there are communities in the State today which are in need of doctors.

The medical profession has the courage of the crusader and the spirit of the missionary, and these qualities must be maintained. Failure in either of these high purposes would demonstrate unworthiness of the trust which is reposed in it, and that can never be.

ELEVENTH ANNUAL MEETING TEXAS RADIOLOGICAL SOCIETY.

The eleventh annual meeting of the Texas Radiological Society was held in the Army Room of the Gunter Hotel, San Antonio, April 28, with the largest attendance in the history of the organization. The program was varied and covered all phases of radiology. A few years ago, 90 per cent of the time of this society was devoted to discussing diagnosis, whereas 75 per cent of the time of this session was devoted to therapy, which indicates the increasing interest being shown in this method of treatment.

Among the visiting essayists from outside of the State were Dr. Albert Bachem of St. Louis, who read a paper entitled, "Unfiltered and Filtered *X*-Ray Doses," and Dr. R. G. Giles of Cleveland, Ohio, who read a paper on, "High Voltage *X*-Ray Treatment of Uterine Fibroids."

The following officers were elected for the ensuing year: President, Dr. Dalton Richardson, Austin; President-Elect, Dr. C. L. Martin, Dallas; First Vice-President, Dr. Davis Spangler, Dallas; Second Vice-President, Dr. E. D. Crutchfield, Galveston; Secretary, Dr. Tom Bond, Fort Worth; Executive Committee, Drs. R. T. Wilson of Temple, I. L. McGlasson of San Antonio and L. W. Kuser of Gainesville.

The meeting ended with a banquet at the Gunter Hotel, with over sixty members and visitors present.

NOTICE, LOUISVILLE ALUMNI.

At a called meeting of the Alumni of all the Louisville, Kentucky, schools of medicine, during the San Antonio session of the State Association, it was decided to have a meeting of the alumni at the next Annual Session which will be held at Austin. Dr. J. E. Gilcreest of Ennis, was elected chairman, and Dr. C. P. Brokaw of Houston, secretary of the Louisville Alumni. Dr. Gilcreest expects to visit Louisville in June, and it was decided to ask one of the Faculty of Louisville University to be the guest of the alumni at the next meeting.

TRANSACTIONS

FIFTY-EIGHTH ANNUAL SESSION OF THE STATE MEDICAL ASSOCIATION OF TEXAS

SAN ANTONIO, APRIL 29, 30 AND MAY 1, 1924

First Day, Tuesday, April 29, 1924

MINUTES OF THE OPENING EXERCISES AND FIRST GENERAL SESSION.

The Fifty-eighth Annual Session of the State Medical Association of Texas was called to order at 10:30 a. m., in the Ballroom of the Gunter Hotel, San Antonio, Texas, April 29th, by Dr. W. H. Hargis, of San Antonio, Chairman of the Arrangement Committee.

Dr. Hargis: The meeting will come to order. It is a very great pleasure to the physicians of San Antonio and to San Antonio as a whole, that this, the Fifty-eighth Annual Session of the State Medical Association should be opened in our city, and following our usual custom we will have an invocation by Reverend J. Stuart Pierce, pastor of the Beacon Hill Presbyterian Church.

INVOCATION.

We are grateful to Thee, our Heavenly Father, for all the blessings Thou dost day by day bestow upon us. As we come together in this assembly today we would remember, and with each hour of this session recall, that Thou art the God of all the earth; that Thou hast made us; that we are Thine, and we would invoke Thy blessings upon us in all of the deliberations of this assembly, in all of the things that shall be thought out and planned out for the health and the happiness of the children of men. May we remember that Thou art the Great Physician, under whom the human physician must work. May we not only invoke Thy blessings upon us in this hour and throughout the sessions of this Association, but may we have Thy blessings to abide upon each of us and our work, in the years that lie out before us.

We thank Thee for the men and the women who have given themselves to the care and the preservation of the health of the human body. We thank Thee for their hearts, for their heads, for the skill of their hands as they minister to those whom we commit to them, into whose hands they are placed, who stand between them and the great beyond. We thank Thee for the traditions of the physicians who have served us in that intimate capacity in our homes; we thank Thee for their characters; we thank Thee for their faith in God, and we pray that Thou wilt be always to them more than human intelligence or physical skill. Be Thou to them the guide when all human instrumentality shall fail. We pray that Thou wouldst let this meeting be a blessing and a benediction to them and to us into whose midst they come; that it may be profitable for the development of those things which shall be considered; that it shall be profitable to all of our people in preserving and promoting the health of humanity. Upon the officers, the outgoing and the incoming, we invoke Thy blessings. Guide us in all the things we think and say and do, that it may be to our good and to the profit of Him whose name is above every name, and we ask it for Christ's sake. Amen.

Dr. Hargis: You will now listen to two violin numbers, by Mrs. Wheat, the wife of one of our San Antonio doctors, accompanied by Mrs. Aneson on the piano.

Dr. Hargis: I now have the honor of introducing to you the Mayor of our city. Mayor Jno. W. Tobin has always been a friend to the physicians, and has co-operated with us in every way, even going to the extent of turning his Health Department over to us. That shows the confidence he has in the real physicians of San Antonio. (Applause).

ADDRESS OF MAYOR JNO. W. TOBIN.

Mayor Jno. W. Tobin: On behalf of the City of San Antonio I want to extend to you a hearty welcome. I don't see how your local cities can spare you for the time that you are spending in our city, but what is their loss is our gain, and I only wish it were possible for the city of San Antonio, I mean by that the administration, because the citizenship will do their part—I wish it were possible that we could do something to show our appreciation of this great organization. I assure you we would surrender all of our health problems to the State Medical Association of Texas. I thank you for your visit, and for the compliment of the invitation to welcome you. (Applause).

Dr. Hargis: I now wish to introduce to you the President of Bexar County Medical Society, the largest and the livest medical society in the State of Texas, Dr. S. P. Cunningham. (Applause.)

ADDRESS OF DR. S. P. CUNNINGHAM.

On behalf of the medical profession of this city I extend to you a cordial welcome, and assure you that we appreciate the fact that you have for a time interrupted your busy lives to be with us.

It would bespeak a very short memory, indeed, to attempt to introduce the State Medical Association to the physicians of this community, or the medical fraternity of Bexar County and San Antonio to the State Medical Association. Previous pleasant association under the shadow of the Alamo is merely being renewed. It is a coincidence that the State Medical Association at its Thirty-fifth Annual Session, in 1903, convened in San Antonio on the same dates as the present convention.

Education has been very properly defined as the practical application of knowledge. The American Medical Association, a national society of physicians, was founded in 1847, as a result of a national convention held in 1846, to raise the standard of medical education in the United States. The membership in 1923 was more than 88,000. It is a federation of state medical associations, which, in turn, are composed of approximately 2,400 county medical societies. Its purposes are to promote the science and art of medicine; to organize the medical profession and safeguard its interests; to elevate the standard of medical education and practice; to bring about uniform legislation for the public welfare; to protect the public health, and crystallize public opinion on problems of hygiene.

It is estimated that in 1853 there were approximately 2,000 doctors in Texas, fifteen of whom met and organized our State Medical Association, for the purpose of advancing the interests of medicine in the State. One cannot read the addresses of those who participated in this meeting, made when medical education, licensure and state health agencies were "without form and void," without marveling at the foresight of the speakers. During the same year, 1853, the organization of the Bexar County Medical Society was perfected, by about twenty of the most progressive physicians in this community. At the time of the organization of this society, San Antonio was only a village; it is now the largest city in the State of Texas, and with the growth of the city the Bexar County Medical Society has grown to be one of the largest societies in the State; and we are proud of the fact that it now owns its own home, close to the heart of this great city, equipped with a library, and with an auditorium for its meetings.

The late 40's and early 50's, then, seem to very definitely mark an epoch of mobilization of talented physicians for the broad humanitarian purpose of scientific ministration to the urgent needs of suffering humanity. Let it be said that this early organization was idealistic. Inspiration will still lead us. Prefacing a medical discussion, the famous Renan said: "For my part, I am accustomed to classify my ideas on any subject in three categories. The first, unfortunately, very limited, is that of certainties; the second is that of probabilities; the third is that of dreams." We will refrain from mentioning the last, if you please, as in all probability it exists for each of us as the dearest part of all.

I feel sure that nothing will occur to mar the harmony and good feeling of this meeting, and that your stay in this city will be pleasant and profitable. I trust that you will leave here thoroughly imbued with the spirit of organized medicine, and that you will have so enjoyed the scientific program and social functions that you will want to again visit our city. (Applause).

Dr. Hargis: A gathering of the physicians of this State for any purpose, more particularly that of promoting the health and well-being of our citizens, would hardly be complete without the presence of the next speaker. He is known to many of you. He is himself the son of a physician. He was untiring in his efforts when, as a public servant, he was in our State Capitol, and he has at all times been ready to drop any work in which he is engaged, to help the physicians of this State in the advocacy of any public health measure. I have the pleasure of introducing to you the Honorable O. B. Black of San Antonio. (Applause).

ADDRESS OF HON. O. B. BLACK.

It is a little bit embarrassing to address such a great body of physicians; having been the son of a physician myself, I know just a little too much about you. (Laughter). When I was Mayor of San Antonio, I was invited to welcome a national convention of undertakers, and knowing that the physicians and the undertakers were closely associated, I said, "Gentlemen, being the son of a physician, I feel closely akin to you undertakers, and I hope that while you are here you will enjoy your stay—but you won't do any business." (Laughter).

Now, I don't hope that for you. I don't think that I could anywhere find such a body of men. I might illustrate that with a little story that Dr. Taylor told me yesterday afternoon. I had said: "Dr. Taylor, I feel that I am going to have the privilege of addressing one of the greatest bodies of men that have ever assembled in the city of San Antonio, or under the Stars and Stripes." He replied, "That reminds me of a story. Not long ago, when autos were just beginning to be used, a man was driving along in one of those cars that made Henry Ford famous, when something got the matter with it. He got out and worked on it, but he couldn't twist those nuts off and on without a wrench. A Swede came along on a load of cotton. He hailed the Swede and said, "Wait a moment. Do you know where I could find a monkey wrench?" The Swede replied, "Well, Mr. Yonson over here, he got a cow-ranch, and Mr. Peterson, he got a hog-ranch, but I don't know where you bane find no monkey-ranch." (Laughter).

If you go back to the time of the very inception of this great institution, long before the Civil War, you will find men like Dr. Cupples and Dr. Throckmorton, men who stood for big principles, high ideals and lofty aims in life. When they saw that the public health was being menaced, and when the call came for citizens to stand for great principles in the promotion and protection of the health of our people, then it was that they conceived the idea of forming this magnificent Association, that has grown and prospered with the years, and that today has flowered into the full fruition of its hopes

and of its ambition, but with a future yet unwritten, and with a sky that leads it on to greater successes.

I read in the history of the State Medical Association that Dr. Cupples was one of the first to successfully remove a man's tongue. I don't know what he would think today, if he were here and could see the great strides that surgery has made since his day. I think Dr. Cupples started the progress that you gentlemen have followed up, and that those great physicians stood for the principles that you have incorporated in your constitution, and for those ideals that you are trying to emulate. By your system of public education, by your doctrines, by your deeds and by your everyday life, you are inspiring men and women to have confidence in the medical profession, and stand for the things that you stand for.

One of San Antonio's most popular mayors was a doctor—Mayor Lyons. It is but meet and proper that this great body assemble again, in San Antonio, where it had its origin, and where some of the men lived who helped to incorporate it. We are in a city over which some doctors have presided, and in which many have played a prominent part from that time to this, having written their names indelibly upon the minds and the hearts of the people.

It may be that the tongue of fame has not heralded them; it may be that no monuments of bronze or stone have been erected to their honor and to their memory, but upon the very pendulum of time they have written their names, and it ticks them off to those that come and go. In their life's service and in the things they stood for, they have built for themselves monuments about whose bases the earthy things will smoulder, and about whose summits the lofty things will dwell, as they point the way to the higher and better things that the State Medical Association of Texas has always stood for, and today is practicing for the public welfare. (Applause).

I heard yesterday about a big protracted meeting that was held at Port Arthur. It seems that the only way the people could be made to work was to urge upon them "personal service." There was a Swede standing in the back, and the evangelist walked up to him while they sang and put his arm around him, saying, "My friend, don't you want to work for Jesus?" The Swede replied, "Well, I don't t'ink so; I work for Dr. Bledsoe." (Laughter). The position of at least this physician, in the community in which he lives, is well established. The physicians of the State of Texas, in their various communities, are exerting an influence that is being felt far and wide. Day by day they are building higher that great edifice, the very stones of which will long speak for them, and long proclaim their good deeds and kind acts. Some of the stones that they are placing in this great structure, this memorial of progress and science, are what they have done for the crippled children, in fitting them to earn an honorable living and enjoy God's own free sunshine; what they have done for the destitute of this land, in helping them back to health; what the Health Officer is doing today to disseminate knowledge concerning the prevention and cure of diseases; what the great medical society has done when it has lent its efforts and its untiring energies to the prevention and cure of tuberculosis, and what it has done through its medical discoveries and marvelous surgical operations, for the upbuilding of mankind and for the promotion of the general public health. They have performed a service that cannot be measured; words fail to describe it.

And as you meet here today, under the auspices of this great organization, bent upon getting a keener insight into and knowledge of your profession (a profession that is so ennobling and so beneficent to humanity), and upon placing your profession upon a higher scale that it may render greater service, all praise should be given you. You have brought these distinguished guests into the city of San Antonio, a city that stands for the same things that you do, a city that maintains one of the best county medical societies and one of the noblest bodies of physicians that can be found anywhere. You have properly met in this city, the cradle of Texas liberty, where men respect women; where the women grow as beautiful and the men are as chivalrous, honorable and noble as anywhere in the world, and where its physicians help to weld and shape the destiny not only of the city of San Antonio, but of the great State of Texas and of the Nation. It is but meet and proper that you should have met here to promulgate further ways and further means of carrying forward your great endeavors.

I want to thank you for the pleasure of coming before you and addressing you. I thank you for having come to the city of San Antonio and having inspired this great city with your presence. I thank you because you brought these distinguished guests here, who are learned in the profession of medicine, and who will leave ideas and thoughts that will grow with the years, and that will benefit the city of San Antonio.

Dr. Hargis wants me to tell this last story and then sit down. Dr. Hargis was once at a banquet, where some gentleman got up to speak, and he spoke on, and on, and on, and still said nothing. Then some lady got up and sang, "Would That I Were a Bird." And she sang, and she sang, and she sang, until it seemed that the angels of Heaven would lean over the parapet of Paradise. Dr. Hargis was heard to murmur, "Yes, would to God that you were a bird; I would have shot you an hour ago." (Laughter).

Dr. Hargis: We will now have the pleasure of listening to the annual address of our honored President, who needs no introduction to this organization, Dr. A. C. Scott, of Temple. (Applause).

ADDRESS OF PRESIDENT DR. A. C. SCOTT.

I am sure that I express the feelings of this great assembly when I say that the people of San Antonio are no more glad to have us here than we are to be here, and we are particularly glad to be here at this time. We had laid our plans to visit you about two weeks later, but decided to slip in ahead of three other conventions which are going to hold their sessions about our usual time of meeting.

When I first saw the light of day—not many years ago, I found myself in a little triangular world up in North Texas, between the forks of the Trinity River on two sides and the Red River on the other. It wasn't very long before I found that that little world was just a trifle bigger, the town of Gainesville occupying one angle, Galveston another and San Antonio the other. A short time later, I was impressed with the idea that Gainesville had the best family doctor in the world. I wasn't very well informed as to what sort of doctors they had around Galveston, but I was informed that next to Gainesville, San Antonio had the best doctors in the world, and it seems that San Antonio has been able to keep up that sort of reputation. Personally, I have always felt that San Antonio was a Mecca to which people could come when in need of scientific attention, and I am sure that the great majority of doctors in this State agree with me.

San Antonio became a very interesting place to me from another standpoint. Not very long after the period I was talking about awhile ago, a little flaxen haired girl persuaded me to marry her, and the first thing she thought about doing was to bring me to San Antonio. I think she thought it would have some influence in moulding my career. We have always been glad that we came to San Antonio on our wedding trip, and now it seems to me that it is but a kind act of Providence that we should come back here at a time when I have reached the point which to me represents the climax in my professional career. It is, indeed, a pleasure to be here, with you San Antonio people. I wish to assure you that it is a pleasure that I shall never cease to appreciate.

(The President's address appears elsewhere, in this number of the JOURNAL, beginning on page 75.)

Dr. Hargis: We will have a vocal selection by Mrs. Jean Walfram, accompanied by Miss Lipps.

Dr. Hargis: I will now turn the meeting over to the President, Dr. Scott, for the transaction of any necessary business.

Dr. Scott: I am going to ask Dr. Lain, Fraternal Delegate from Oklahoma, President of the Oklahoma State Medical Society, to stand. (Applause).

President Scott: We will be dismissed with a word of prayer, by the Reverend P. B. Hill, pastor of the First Presbyterian Church.

BENEDICTION.

Almighty God, our Father, we lift our hearts unto Thee today. We thank Thee that we have a land where the healing arts are known and practiced, and we pray that Thy blessings may rest upon Thy servants who are here today, and all who represent this great profession in all of its varied branches. We pray that day by day and hour by hour Thou wouldst open more and more to them the things which are hidden and yet revealed, in the wonderful things which Thou hast made; and we pray Thee, Oh God, that Thou wouldst bless them in all of their work and in all of their purposes in every way. We thank Thee for what they have accomplished; we thank Thee for the things that are being done today; we thank Thee for this meeting and for this conference, and for the bearing that it has upon public health, and upon the moral and the spiritual condition of the people. We pray that Thou wouldst be with them and let Thy protecting hand be upon them in all of their ways. We pray that Thou wouldst bless them and those who are near and dear to them, from whom some may be separated; we pray that Thou wouldst add Thy strength and Thy power and Thy knowledge and all that Thou hast to impart, to them in the practice of their profession. And may Thy grace, mercy and peace be upon them, upon our Nation, upon our people everywhere. We ask in the name of the Father, Son and Holy Ghost. Amen.

MINUTES OF THE HOUSE OF DELEGATES.

FIRST DAY, APRIL 29.

The House of Delegates was called to order by President Dr. A. C. Scott, of Temple, at 2 p. m., in the Pink Room of the Gunter Hotel.

President Scott: The first order of business is the calling of the roll.

The Secretary: The list from which I will call the roll, has been approved by the Reference Committee on Credentials. If there are errors to be corrected, or if there are any delegates who have not been called, let them so announce. The Credentials Committee will sit again in a few minutes.

The roll was called by the Secretary, who announced that there were 93 members present.

MEMBERSHIP OF THE HOUSE OF DELEGATES *

Anderson—H. R. Link.
Angelina—A. E. Sweatland.
Austin—Otto E. Steck.
Bastrop—H. B. Combs.
Bee—L. E. Parr.
Bell—J. M. Frazier.
Bexar — Thos. Dorbandt, E. W. McCamish, Theo. Y. Hull.
Bosque—J. C. Jarrett.
Bowie—J. N. White.
Brazoria—F. R. Winn.
Brazos-Robertson—S. J. Alexander.
Brown—Ben M. Shelton.
Burleson—E. W. Stork.
Caldwell—A. A. Ross.
Cameron—C. M. Cash.
Camp—R. Y. Lacy.
Cass—A. E. Starnes.
Cherokee—J. F. Johnson.
Childress-Collingsworth-Donley-Hall—W. Wilson.
Clay—L. F. Crook.
Collin—W. S. Wysong.
Coleman—T. R. Sealy.
Colorado—C. E. Duve.
Comal—R. Wright.
Comanche—P. H. Chilton.
Cooke—J. M. Wattam.
Coryell—D. C. Homan.
Dallas—M. E. Taber, W. M. Young, D. L. Bettison, C. R. Hannah.
Denton—G. D. Lane.
DeWitt—J. W. Burns.
Eastland—J. H. Caton.
Ellis—J. E. Gilcreest.
El Paso—J. H. Gambrell.
Erath—S. D. Naylor.
Falls—J. W. Torbett.
Fort Bend—J. C. Johnson.
Freestone—W. McFadin.
Galveston—M. L. Graves.
Gonzales—W. T. Dunning.
Grayson—W. A. Lee.
Gregg—V. R. Hurst.
Guadalupe—R. L. Knolle (N. A. Poth).
Hale-Floyd-Briscoe-Swisher—C. C. Gidney.
Hamilton—C. E. Durham.
Hardeman-Cottle—J. T. Horton.
Harris—C. C. Cody, A. H. Flickwir, E. L. Goar.
Harrison—Rogers Cocke.
Hays—M. C. Williams.
Henderson—M. M. Moss.
Hidalgo—J. G. Webb.
Hopkins—W. E. Connor.
Houston—R. E. Dillard.
Hunt—Joe Becton.
Jack-Young—R. A. Duncan.
Jefferson—W. R. Tatum.
Johnson—J. D. Osborn.
Jones—J. E. Montgomery.
Kaufman—E. M. Fowler.
Kerr-Kendall—J. E. McDonald.
Kleberg—Hendry Allison (C. P. Yeager).
Lamar—E. Goolsby.
LaSalle-Frio—J. E. Beall.
Lee—H. G. Hertel.
Leon—E. P. Powell.
Limestone—J. B. Barnett.
Llano—Oscar Huff.
Lubbock-Crosby—Wm. L. Baugh.
Marion—J. A. R. Moseley.
Matagorda—A. S. Morton.
Medina-Uvalde-Maverick-Val Verde-Edwards — S. B. Hudson.
Montgomery—C. M. Covington.
McCulloch—J. G. McCall.
McLennan—J. W. Gidney, H. F. Connally.
Nacogdoches—T. J. Blackwell.
Navarro—L. E. Kelton.
Nueces—H. R. Giles.
Orange—W. P. Coyle.
Panola—J. A. Daniels.
Potter—S. P. Vineyard.
Red River—Gavin Watson.

*For the sake of convenience, the membership of the House, as developed by the several reports of the Reference Committee on Credentials, and the several roll calls, is combined in this list.

Rusk—Rube Shaw.
San Patricio—P. Worley.
San Saba—A. D. Nelson.
Stephens—B. A. Swinney.
Tarrant—J. H. McLean, S. A. Lundy.
Tom Green—A. C. DeLong.
Travis—C. W. Goddard.
Upshur—J. G. Daniels.
Van Zandt—D. Leon Saunders.
Wichita—T. H. Parmley.
Williamson—J. F. Flinn.
Wood—V. E. Robbins.

EX-OFFICIO MEMBERS.

President—A. C. Scott, Sr., Temple.
Secretary—Holman Taylor, Fort Worth.
Treasurer—K. H. Beall, Fort Worth.
Trustees—M. L. Graves, Galveston; John T. Moore, Houston; W. B. Russ, San Antonio; J. S. Turner, Dallas.
Council on Medical Defense—W. D. Jones, Dallas; F. P. Miller, El Paso; A. P. Howard, Houston.
Councilors—R. B. Homan, El Paso; P. C. Coleman, Colorado; R. S. Killough, Amarillo; Joe Dildy, Brownwood; C. S. Venable, San Antonio; F. U. Painter, Corpus Christi; Joe Gilbert, Austin; W. B. Thorning, Houston; D. S. Wier, Beaumont; R. H. McLeod, Palestine; N. D. Buie, Marlin; A. B. Small, Dallas; J. K. Smith, Texarkana.
Council on Legislation and Public Instruction—M. F. Bledsoe, Port Arthur; S. E. Thompson, Kerrville; A. F. Beverly, Austin; C. M. Rosser, Dallas; I. C. Chase, Fort Worth; H. W. Cummings, Hearne.

The President: The next order of business is the reading of the minutes of the last meeting.

The Secretary: The minutes of the last meeting were printed in the June, 1923, JOURNAL, beginning on page 87. There was an error, which has been explained editorially. It was not material, except that it credited the President-Elect with being absent when he was present at the introduction of officers, and had no reference to the transactions of the House of Delegates.

On motion of Dr. John S. Turner, of Dallas, seconded by Dr. K. H. Beall, of Fort Worth, the minutes of the previous meetings of the House of Delegates, as published in the June, 1923, JOURNAL, were declared adopted.

The President: The next order of business is the appointment of reference committees, which the Secretary will announce.

The Secretary: The reference committees appointed by the Chair are as follows:

REFERENCE COMMITTEES.

Reference Committee on Credentials — Dr. T. R. Sealy, Coleman, Chairman; Drs. W. M. Young, Dallas; S. A. Lundy, Tarrant; J. A. Daniels, Panola, and S. P. Vineyard, Potter.
Reference Committee on Reports of Officers and Committees—Dr. C. W. Goddard, Travis, Chairman; Drs. J. M. Frazier, Bell; A. C. DeLong, Tom Green; J. E. Boyd, Hill, and A. O. Cragwell, Erath.
Reference Committee on Resolutions and Memorials—Dr. Calvin R. Hannah, Dallas, Chairman; Drs. C. E. Durham, Hamilton; E. W. McCamish, Bexar; W. Wilson, Childress-C-D-H.; G. D. Lane, Denton.
Reference Committee on Finance — Dr. W. P. Coyle, Orange, Chairman; Drs. C. C. Cody, Harris; J. C. Jarrett, Bosque; W. P. McCall, Ellis, and D. W. Black, Lampasas.
Reference Committee on Amendments to Constitution and By-Laws—Dr. J. W. Burns, DeWitt, Chairman; Drs. A. E. Sweatland, Angelina; E. L. Goar, Harris; D. Leon Sanders, Van Zandt, and D. L. Bettison, Dallas.
Reference Committee on Scientific Work—Dr. A. H. Flickwir, Houston, Chairman; Drs. F. R. Wynn, Brazoria; J. H. Gambrell, El Paso; J. G. McCall, McColloch, and Thos. Dorbandt, Bexar.

The Secretary: The Chairmen of these committees, immediately upon adjournment, will please call at the desk and get the matters referred to them.

The President: I have some things to say to you in a message which I will present, by preference, in executive session, which I will ask you to hold later on. There are some things in connection with the objects and purposes of this Association, which I wish to discuss with you in a very frank sort of manner.

Next in the regular order of business is the report of the Secretary.

The Secretary then presented his report, as follows:

REPORT OF THE SECRETARY.

The unusually early date of our Annual Session will make a difference in our membership report. Quite a substantial number of memberships are usually paid for during the last few days prior to the Annual Session, and the reports must go to the printer this year at such time as to exclude a number of these. Last year there were 3,484 members on May 3. That was 50 more than had paid on the same day of the previous year. The total membership for 1923 was 3,724, which is 47 more than for the year 1922. This is the largest membership we have ever had. At this time (April 23) there are 3,495 members. This is an advance of 11 members over a later date of last year. It looks as if there will be a substantial increase in the membership for the current year.

The following societies have not filed their annual reports: Ector-Midland-Martin-Howard, Fayette, Matagorda, Montague and Scurry-Dickens-Kent, in addition to which neither report nor dues have been received from Brazoria, Colorado, Hemphill-Roberts-Lipscomb-Ochiltree and Throckmorton Societies.

Last year, the charters of Marion and Throckmorton Societies were ordered taken up, because of insufficient members to carry on, for three successive years. Marion County Society revived its membership, made its annual report, paid dues for 5 members, immediately after the Annual Session, and has qualified for 1924. Throckmorton County Society made no report, and its charter stands forfeited.

Madison and Menard-Kimble Societies failed to come up to the numerical requirements as to membership during the year 1922, and were held on probation. Madison County Society made the required number during the year, but Menard-Kimble did not. So far, there have been 5 members paid for by Madison County Medical Society and 4 by the Menard-Kimble County Medical Society. It would appear that these two organizations have either met the requirements of the By-Laws, or are about to do so.

In the last annual report, Llano, Marion, Menard-Kimble and Throckmorton County Societies were shown as having fallen below the numerical requirements. Of these, Marion, Menard-Kimble and Throckmorton, are accounted for in the preceding paragraphs of this report. Llano County Society secured the fifth member during the year, and has paid for that number this year.

There have been two changes in the list of county societies. The Comal-Guadalupe County Medical Society has been disbanded, and the Comal County Medical Society and the Guadalupe County Medical Society, have been chartered. These societies appear to be beginning their independent careers quite auspiciously. The Mitchell-Nolan County Medical

Society has also been discontinued, and two new societies have been chartered in its stead, namely, the Mitchell County Medical Society and the Nolan County Medical Society. These societies have also started off quite encouragingly.

The office of the State Secretary has experienced some little difficulty during the year in taking care of members who have not been able to continue their membership, for one reason or another. It seems that our management is a bit loose in this particular. The State Secretary is not allowed to receive dues direct from a member, and when a member can not find a secretary to whom to pay dues, or when at the last minute the member finds that his county society is dead and there is not time for him to seek new alignment, a predicament is created for which there should be some relief. The State Secretary has invariably laid these matters before the proper Councilors, and generally the situation has been cared for. The State Association has no members except those certified to the State Secretary as being in good standing in county societies. This places a burden and a responsibility on county societies which should not be shirked. It may be distasteful at times to continue the membership of an individual, or to accept a membership by transfer, under certain circumstances, but there should be such wholesome respect for the law which we ourselves have made, as to inspire us to action no matter what the difficulty and the embarrassment. The machinery for correcting impossible situations is fairly efficient and needs only to be set in motion. We all avoid unpleasantness, but life is such that it cannot always be so. However this may be, it is not the function of the State Secretary to adjust situations so arising. He is perfectly willing to act as intermediary, but must not be blamed for results.

It is undeniably a fact that some of our county society secretaries do not look upon their responsibilities as being of any consequence. As a matter of fact, the control of medical affairs in their respective jurisdictions is in their hands. That is to say, the county society is responsible, but the county society secretary is the executive officer of the county society. If he fails to do his part, almost necessarily the society will fail to do what is expected of it, and organized medicine suffers.

I particularly would stress the necessity of reporting to the State Secretary the death of not only members but of honorable physicians wherever located in the State. Rarely ever does a report of this sort reach the State Secretary unsolicited, and quite frequently it is necessary for the State Secretary to repeatedly write to county secretaries in order to get a reasonably adequate amount of data for the preparation of an obituary notice for the JOURNAL. As a matter of fact, the records of a county society should be in such shape that data of this sort can be had in a moment, at least such as may be essential. When recourse has to be had to the family of a deceased physician, there are frequently delays that are vexatious to all concerned, strange to say. The Secretary can not be blamed for that, of course. The obituary notice in the JOURNAL and the Memorial Exercises each year, constitute the last service we can render to worthy, deceased physicians, and it should be rendered freely and gratefully.

There are numerous discrepancies in the By-Laws which might be enumerated here and discussed to advantage, discrepancies which interfere with the orderly management of our organization and its component parts, but the Committee on Revision of the Constitution and By-Laws will deal with these situations adequately in the long run, and that matter will not be referred to.

Annual reports have come in rather satisfactorily, but there is still more pulling and hauling necessary than should be. Our members should have more regard for their county society secretaries than to cause them to wait and worry over the collection of their dues, which seems to be the principal cause of the dilatoriness complained of. The amount is small and the consequences of late payment may be serious. It has happened that the Council on Medical Defense has not been able to defend a member who was sued for medical malpractice, because the said member had not paid his dues promptly, and stood delinquent at the time the incident occurred upon which the suit was based.

Recently a county society by vote suspended a member, and the State Secretary was so notified. It is assumed that the member so suspended, not being entitled to any of the benefits of the county society, would not be entitled to register at the Annual Session, that being one of the few benefits of membership in the State Medical Association referred to in the By-Laws. The member in question appealed to the Councilor, alleging that the trial had not been conducted in due order, and so forth, and prayed that the sentence of suspension be suspended until the appeal could be decided on its merits. The Councilor directed that the sentence be suspended until the appeal could be concluded, and so notified the State Secretary. The assumption is that the member involved may register at the Annual Session, and the State Secretary so rules. It is the function of the Board of Councilors to decide this question, should any disagree with the State Secretary in his decision.

Finally, the State Secretary desires very earnestly to thank the officers of the present administration, and the members of the Association during the past year, for the cooperation vouchsafed and the courtesies always extended him in connection with the discharge of his duties.

Fraternally,

HOLMAN TAYLOR.

The report was referred to the Reference Committee on Reports of Officers and Committees.

The President: The next order of business is the report of the Treasurer.

REPORT OF THE TREASURER.

Dr. K. H. Beall of Fort Worth: I respectfully report that there is in the treasury of the Association, as of April 22, 1924, cash in the amount of $47,136.40, of which $46,483.23 is on deposit with the First National Bank of Greenville, Texas, while $653.07 is deposited with the First National Bank of Fort Worth, Texas.

The fund with the First National Bank of Greenville, Texas, is secured by a personal bond of $50,000, in addition to the resources of the bank.

Total receipts from the Secretary amounted to $50,898.50. Bonds sold amounted to $10,250.00, and $2,790.00 was received as interest, while the total disbursements amounted to $45,585.59.

Referred to the Reference Committee on Finance.

The President: The next order of business is the report of the Board of Trustees.

Dr. John T. Moore of Houston, Chairman of the Board, then read the report, as follows, with appropriate comments:

REPORT OF BOARD OF TRUSTEES.

In transmitting to you the report of the Board of Trustees for this year, I feel that steady progress has been made along many lines. As the Association grows, its problems become more numerous and complicated. We have found that our expenses have

grown as do the expenses of any other line of business. This report, made at this time, will not make as strong a financial showing as we would like, owing to the increase in the expense of reorganizing and manning the office for a greater work. We feel sure that the larger work that we are attempting will in a short while make a showing that will thoroughly satisfy the expectations of every member of the Association.

The Board feels that something should be said about the date of our Annual Meeting, because, after fixing the date for early May, we were asked by the Committee on Arrangements, at San Antonio, to change the same, so as not to conflict with other conventions. After much consideration, we decided that it would be better to make the date April 29, 30 and May 1. This has necessitated a hurried closure and auditing of our books, so as to be able to make our report. Notwithstanding the change, we understand that another convention is running into us at this time, having pushed up their meeting one week from the date originally set. A considerable hardship has been worked upon the Association in selecting this early date, and it has also put us to considerable additional expense. We feel that this word of explanation is justifiable. It probably will be better for us to stick to our usual meeting time in the future.

As shown in the Secretary's report, the manner of handling the report of discussions in the various sections has not proven satisfactory, and has cost the Society quite a neat little sum of money. The Board feels that it will be unwise to pay the price necessary to get court stenographers to report the section meetings at such a great expense. The expense might very well be borne where the reports of discussion are satisfactory, but for some reason they are not. The Board feels that the secretaries for the sections should be selected with the idea of having them take the reports of discussions in longhand. These reports could go to the authors of the discussions and be revised. That probably would be more satisfactory than a report taken by a stenographer.

Your Board of Trustees has undertaken to handle the funds of the Council on Legislation and Public Instruction in the same manner as other similar funds of the Association, for example, the Medical Defense Fund. We think this will prove entirely satisfactory to all concerned. In order to keep the record of these funds correct in every particular, the money should be paid to the State Secretary and pass through the channels for the proper record, as the bookkeeping of the Association is all done in the Secretary's office.

The Council on Legislation and Public Instruction asked the Board for a loan of $1,000, which was granted, but the same has not yet been passed from the general fund to this special fund.

We are glad to be able to report that the actual work of preliminary preparations of the Medical History of Texas has begun. With the reorganization of the office of the State Secretary and the JOURNAL completed, we feel that we are in a position to go forward very definitely along this and other lines. We will have to keep in mind that there has necessarily been an increase in the expenses of these offices. The Trustees look upon this increase as but a proper step towards the development of a bigger business. Of course, with the increased outgo, it will be necessary, as a good business proposition, to make an increase in our income.

Some consideration ought to be given by the House of Delegates to the idea of so increasing the dues as to provide a permanent fund for the educational work that is now being attempted. It will be practically impossible to maintain this work in a high state of efficiency on a subscription basis.

The Association and the Board of Trustees, have suffered a distinct loss in the death of Mr. Kernaghan, who has been such a satisfactory auditor for the Association for so many years. We wish to pay our respects to a man so straightforward, clean and helpful as Mr. Kernaghan has been. A vote of appreciation from the House of Delegates to his wife, I am sure, will be in harmony with your feelings.

We are fortunate in having Messrs. Hutchinson and Smith, as successors to Mr. Kernaghan. A little departure, which we think is an improvement, has been made in the form of the reports.

The Auditor's report follows:

AUDITOR'S REPORT
Balance Sheet
State Medical Association of Texas
as of April 22, 1924.

ASSETS

Cash with Treasurer		$46,483.33
Cash with Secretary		653.09
Cash in Secretary's Office		80.00
Liberty Bonds—par value		5,000.00
First Mortgage Loans		11,123.00
Notes Receivable	$ 448.54	
Less Reserve for doubtful notes	250.00	198.54
Accounts Receivable—Advertising		3,516.67
Furniture and Fixtures	1,771.04	
Less Depreciation Reserve	346.14	1,424.90
Leasehold Improvements	450.00	
Less Depreciation Reserve	157.50	292.50
Prepaid Expense—Annual Meeting 1924		35.21
Total Assets		$68,807.22

LIABILITIES

Reserves:		
Unearned Dues Association Fund	$ 6,720.00	
Unearned Dues Journal Fund	6,720.00	
Unearned Dues Medical Defense Fund	3,361.00	
Total Reserves		$16,801.00
Surplus:		
Association Funds	$ 8,487.13	
Journal Fund	4,333.61	
Medical Defense Fund	12,385.49	
Public Health and Legislation Fund	5,607.34	
Unappropriated Fund	21,083.85	
Collection and Preservation of Records	108.80	52,006.22
Total Liabilities		$68,807.22

ANALYSIS OF SURPLUS
State Medical Association of Texas,
June 22, 1924

Association Fund:		
Surplus April 30, 1923	$ 8,502.62	
Less Deficit 1923-1924	15.49	
Net Surplus April 22, 1924		$ 8,487.13
Journal Fund:		
Surplus April 30, 1923	4,459.11	
Less Deficit 1923-1924	125.50	
Net Surplus April 22, 1924		4,333.61
Medical Defense Fund:		
Surplus April 30, 1923	10,154.87	
Earnings 1923-24	2,230.62	
Net Surplus April 22, 1924		12,385.49
Public Health and Legislation Fund:		
Earnings 1923-24	5,607.34	
Surplus April 22, 1924		5,607.34
Unappropriated Fund:		
Surplus April 30, 1923	16,889.50	
Earnings 1923-24	2,147.44	
Surplus 1923	2,046.91	
Surplus April 22, 1924		21,083.85
Collection and Preservation of Records:		
Earnings 1923-24		108.80
Total Net Surplus		$52,006.22

RECAPITULATION OF EARNINGS
State Medical Association of Texas
From April 30, 1922, to April 22, 1924

Medical Defense Fund—Operations	$ 1,720.77	
Medical Defense Fund—Interest	509.85	$ 2,230.62

Public Health and Legislation—Fund	$ 5,457.34	
Public Health and Legislation—Interest	150.00	5,607.34
Unappropriated Interest		2,130.15
Less Deficits:		
Association Fund	$ 15.49	
Journal Fund	125.50	140.99
Net Earnings		$ 9,827.12

ASSOCIATION FUND

Statement of Receipts and Disbursements
From April 30, 1923, to April 22, 1924

RECEIPTS

Membership Dues, 1923	$ 7,446.00	
Membership Dues, 1924	6,720.00	
Total Receipts		$14,166.00

DISBURSEMENTS

Annual Meeting Expense:		
Badges	$ 181.63	
Railroad Identification Certificates	15.50	
Printed Reports	227.90	
Programs	179.60	
Reportorial Work	872.75	1,477.38
State Councilor's Expense:		
P. C. Coleman	$ 25.00	
Stationery	59.05	84.05
Legislative Committee Expense:		
Jeff L. Reese	$ 509.46	
C. L. Black	410.00	
Ann Watt	16.00	
Expense of Secretary to Austin	42.74	
Printing Reports	12.80	
Stationery and Printing	69.75	960.75
Auditor and Insurance		62.67
Secretary's Expense to A. M. A. Meeting		413.21
Secretary's Expense to S. M. A. Meeting		85.62
Salaries:		
Secretary	$ 1,919.99	
Bookkeeper	591.49	
Stenographer	670.33	3,181.81
Secretary's Office Expense:		
Stationery and Supplies	$ 150.39	
Telegraph and Telephone	149.84	
Rent	400.08	
Binding Journals	41.75	742.06
Educational Campaign—Austin		20.96
Depreciation of Furniture and Fixtures		74.03
Building Maintenance		223.29
Postage		117.78
Freight and Express		17.88
Total Disbursements		$ 7,461.49
Balance		$ 6,704.51

JOURNAL FUND

Statement of Receipts and Disbursements
From April 30, 1923, to April 22, 1924

RECEIPTS

Subscriptions Earned 1923	$ 7,446.00	
Subscriptions Unearned—1924	6,720.00	
Subscriptions Earned—Non-Members	51.00	
Sales of Journals	3.25	
Advertising Sold	15,356.15	
Total Receipts		$29,576.40

DISBURSEMENTS

Printing Journals		$11,399.94
Engraving		725.91
Postage—Mailing		486.47
Commissions on Advertising		729.45
Administration Expenses		285.46
Auditor and Insurance	$ 125.28	
Stationery and Supplies	439.12	
Subscriptions to Periodicals	35.45	
Telegraph and Telephone	299.77	
Rent	679.92	
Postage	235.61	
Freight and Express	.82	
Building Maintenance	446.59	2,262.56
Salaries:		
Editor	$ 3,840.01	
Bookkeeper	1,009.90	
Stenographer	1,513.13	6,363.04
Bad Accounts Charged Off		$ 581.00
Depreciation on Furniture and Fixtures		148.07
Total Disbursements		$22,981.90
Balance		$ 6,594.50

MEDICAL DEFENSE FUND

Statement of Receipts and Disbursements
From April 30, 1923, to April 22, 1924

RECEIPTS

Dues, 1923, Earned	$ 3,722.00	
Dues, 1924, Unearned	3,361.00	
Total Receipts		$ 7,083.00

DISBURSEMENTS

Attorney's Fees:		
Jose Auaqa et ux. Case	$ 100.00	
R. L. Harris Case	100.00	
Ed. Dresser Case	200.00	
W. L. Harris Case	200.00	
Mrs. Epps Case	110.00	
R. E. Hilburn Case	50.00	$ 760.00
General Attorney, Retainer Fee		600.00
Legislative Committee Expense		2.65
Rents		120.00
Salaries:		
Secretary	$ 240.00	
Bookkeeper	120.00	
Stenographer	120.00	480.00
Legal Expense—General Attorney		4.08
Stationery and Supplies		34.50
Total Disbursements		$ 2,001.23
Balance		$ 5,081.77

PUBLIC HEALTH AND LEGISLATION FUND

Statement of Receipts and Disbursements
From April 30, 1923, to April 22, 1924

RECEIPTS

Subscriptions 1923	$ 8,298.06	
Total Receipts		$ 8,298.06

DISBURSEMENTS

Traveling Expenses:		
Jeff L. Reese	$ 764.59	
Dr. Chase	51.23	
Secretary	2.00	817.82
Salaries:		
Jeff L. Reese	$ 820.00	
D. R. Venable	1,200.00	2,020.00
Copies of Acts for Legislative Work		2.90
Total Disbursements		$ 2,840.72
Balance		5,457.34

AUDITOR'S CERTIFICATE

April 22, 1924.

To the Board of Trustees
State Medical Association of Texas,
Fort Worth, Texas.

Gentlemen:

We have audited the accounts of the State Medical Association of Texas, for the period from April 30, 1923, to April 22, 1924, and as showing the financial condition of the Association as of the latter date, as reflected by the Balance Sheet, herewith submitted, together with supporting schedules.

All recorded receipts and disbursements were checked in detail and found in order, as were the securities in the hands of the Treasurer.

In our opinion, the Balance Sheet and supporting schedules reflect the true condition of the Association at April 22, 1924.

Respectfully submitted,

HUTCHINSON & SMITH,
Members American Institute of Accountants.

It will be noted under "Recapitulation of Earnings" in the Auditor's report, that the net earnings for the year are $9,827.12. This includes, however, the public health and legislation fund, amounting to $5,457.34 of contributed money and $150.00 interest. This is, of course, not an earning, and should be subtracted from the net earnings shown in the report. Subtracting the one from the other, it appears that we have actually earned $4,219.78, which includes interest on all of our funds, and the increase in receipts over expenditures in the medical defense fund. As a matter of fact, in actual operation, we have lost money. Of course, the loss is easily accounted for and we need not be ashamed of it. For one thing, the last fiscal year is two weeks shorter than the previous fiscal year, with which we make comparisons, and the particular two weeks that have

COMPARATIVE STATEMENT
Association Fund

RECEIPTS

	1922-1923	1923-1924	Increase	Decrease
Membership Dues	$7,352.00	$7,446.00	$ 94.00	

DISBURSEMENTS

Annual Meeting Expense	$1,224.93	$1,477.38	$ 252.45	
State Councilor's Expense	207.55	105.01		102.54
Legislative Committee Expense	1,386.46	960.75		425.71
Indemnity Bond Premium	21.68			21.68
Auditor and Insurance	40.82	62.67	21.85	
Secretary's Expense A. M. A. Meeting	117.37	413.21	295.84	
State Secretary's Conference	53.61			53.61
Secretary's Expense Board of Trustees	15.13			15.13
Secretary's Expense S. M. A. Meeting		85.62	85.62	
Salaries	2,566.89	3,181.81	614.92	
Secretary's Office Expense	1,019.65	1,101.01	81.36	
Depreciation Furniture and Fixtures		74.03	74.03	
	$6,654.09	$7,461.49	$1,426.07	$ 618.67
Net Increase in Expenses			$ 807.40	
Less Net Increase in Receipts			94.00	
Net Decrease of Earnings 1923 over 1922			$ 713.40	

COMPARATIVE STATEMENT
Journal Fund

RECEIPTS

	1922-1923	1923-1924	Increase	Decrease
Membership Dues	$ 7,352.00	$ 7,446.00	$ 94.00	
Subscriptions—Non-Members	25.00	51.00	16.00	
Sales of Journals	17.75	3.25		14.50
Advertising Sales	13,985.53	15,356.15	1,372.62	
	$21,388.28	$22,856.40	$ 1,482.62	$ 14.50

DISBURSEMENTS

Printing Journals	$10,383.18	$11,399.94	$ 1,016.76	
Engraving	371.40	725.91	354.51	
Postage—Mailing	424.66	486.47	61.81	
Advertising Commissions	628.28	729.45	101.17	
Discounts to Advertisers	244.99	285.46	40.47	
Administration Expense	1,714.25	2,262.56	548.31	
Legal Expense	12.50			12.50
Advertising	136.75			136.75
Salaries	5,133.11	6,363.04	1,229.93	
Bad Accounts Charged Off		581.00	581.00	
Depreciation		148.07	148.07	
	$19,049.12	$22,981.90	$ 4,082.03	$ 149.25
Net Increase in Expenses			$ 3,932.78	
Less Net Increase in Receipts			1,468.12	
Net Decrease in Earnings 1923 over 1922			$2,464.66	

COMPARATIVE STATEMENT
Medical Defense Fund

RECEIPTS

	1922-1923	1923-1924	Increase	Decrease
Membership Dues	$3,676.00	$3,722.00	$ 46.00	

DISBURSEMENTS

Attorneys' Fees	$2,271.55	$ 760.00		$1,511.55
General Attorneys Retained	600.00	600.00		
Attorneys' Fees—Med. Practice Act	433.00			433.00
Pamphlets	44.00			44.00
Legislative Committee Expense		2.65	2.65	
Telephone and Telegraph	9.72			9.72
Salaries	480.00	480.00		
Rents	120.00	120.00		
Legal Expenses		4.08	4.08	
Stationery Supplies		34.50	34.50	
	$3,958.31	$2,001.23	$ 41.23	$1,998.31
Net Decrease in Expenses			$1,957.08	
Plus Net Inerease in Receipts			46.00	
Net Earnings 1923 over 1922			$2,003.08	

been omitted from the year cover the time of our greatest income. If we could account for this additional income, both the Journal and the Association Funds would show healthy balances instead of debits.

The statement of receipts and disbursements of the several funds will give much detailed information, to which attention is directed, but the comparative statements of the several funds will mean more in getting the details of our receipts and expenditures than any of the compilations in the Auditor's report. It will be noted that there is an increase in expense in almost every direction, but

each increase can be easily explained. It is this uniform increase that has made the decrease in our earnings. Take the Association fund, for instance. The increase in expense of the annual meeting is largely incident to the employment of expert court reporters, already referred to. The trip of the Secretary to San Francisco, Washington and Chicago, also involved additional expenditures over those customary in attending the same meetings. The increase in salaries is also quite an item. The increase in the Secretary's office expenses is taken up by the additional stenographer and the enormously increased stamp account. This fund shows a net decrease in *earnings* of $713.40. The increase in expenses in the JOURNAL fund was, of course, occasioned by the increased size of the JOURNAL, and the increased size was made necessary primarily by the enormous amount of material turned in by the scientific sections last year. Getting down to figures, there were 1,308 pages in the last volume, as against 1,174 in the previous volume, which is an increase of 134 pages. Of the 134-page increase in reading matter, 103 were of Original Articles. As against this increase in reading pages, there was an increase of only 60 in the advertising pages. The difference in income would not begin to care for the difference in expenses, and the JOURNAL actually lost during the year, $125.50. The printing bill alone was $1,016.70 above that of the year before, and the expense of illustrating the articles was increased by $354.51. The postage, because of the larger size JOURNAL, increased $61.81. As the advertising income increased, the advertising commissions increased, also. That does not hurt. Of course, in this fund the increase of salaries also has its effect. It will be understood, also, that the accounts charged off, including the share of the JOURNAL and the Association, served further to decrease our earnings on paper. The Medical Defense Fund made money. There were not nearly so many suits filed, and the big item in this account, namely, attorney's fees, showed a decrease of $1,511.55. There was an increase in expenses in this fund, incident to the purchase of stationery and books.

We wish particularly to commend the most efficient work of our Secretary-Editor, Dr. Holman Taylor. We also wish to express our appreciation to the entire office force, for their faithfulness and loyalty to us in every way.

Respectfully submitted,

JNO. T. MOORE, Chairman.

Dr. Moore: The report omits something very important. We failed to mention the death of our coworker, long-time friend and great man, Dr. C. M. Alexander, of Coleman, who passed to his reward during the year. Dr. M. L. Graves of Galveston was appointed to take the place of Dr. Alexander.

Referred to the Reference Committee on Finance.

The President: We will now have the report of the Board of Councilors.

Dr. W. B. Thorning of Houston, then presented the report of the Board of Councilors, with suitable comment.

REPORT OF THE BOARD OF COUNCILORS.

In this more or less preliminary report, we will discuss only a few items which we desire particularly to place before the House of Delegates early in the session, that ample time may be had for careful consideration. Much of the routine work of the Board, such as the dissolution and reorganization of County Societies, will be covered fully in the report of the Secretary and need not be duplicated here.

We take great pleasure in announcing that the two courses in post-graduate instruction will be given again this year, and that each will be for a period of two weeks. We again wish to call attention to the fact that this highly constructive work is made possible by the consideration of the Board of Regents of the University of Texas and the Board of Trustees of Baylor University, together with the hearty and enthusiastic co-operation of their respective medical faculties. We cannot refrain from an attempt to express to these two universities, and particularly to the teaching forces, the very keen appreciation of the entire membership of the State Medical Association for this splendid work. If the value of this service to the people of Texas could be expressed in dollars and cents, it would run to astounding figures. Each physician who has attended the previous courses has gone home a "booster," and we predict a record-breaking attendance this year. We have every reason to hope and believe that post-graduate work in Texas is now so firmly established that we shall never think of retracing our steps. On the other hand, we should remember that the teaching forces are making this contribution of time and energy at the end of a strenuous period and while we must commend the splendid spirit of altruism, we should not "ride a free horse to death." In other words, if this added burden becomes too great, some steps should be taken toward awarding a remuneration above and beyond the mere satisfaction that comes from the knowledge of a work well done.

We desire to call the especial attention of the House of Delegates to the financial statement of the Council on Legislation and Public Instruction, as contained in the report of the Secretary. It will be remembered that the House of Delegates last year decided that the work of the Council on Public Instruction should be financed by voluntary subscription. The work of collecting the fund became the duty of the Board of Councilors. How well we succeeded is reflected in the above mentioned financial statement. That the figures are far below what we had hoped for, we must regretfully admit, but we believe an explanation can be given. The need for this fund has been stressed in the JOURNAL, every County Secretary has received one or more communications in regard to it, which it is presumed he has read at society meetings; each Councilor has worked over his respective district as thoroughly as possible and, in addition, several thousand letters of appeal have been mailed to individual members. It is, therefore, inconceivable that any member has failed to contribute because of failure to hear about it. What, then, is the answer? In the opinion of the Board of Councilors there can be but one; the rank and file of the profession either do not fully comprehend the significance of the proposed educational campaign or, if comprehending, they are not convinced of its necessity.

In the opinion of your Board of Councilors, the medical profession can render no greater service to the people of Texas than by creating a sentiment which will compel an observance of the present laws relating to the practice of medicine. It is but a truism to remark that no law is ever properly enforced unless public opinion demands its enforcement. It is not primarily the duty of the medical profession to enforce laws. We are not in the enforcement business. How else, then, can we aid in enforcing medical laws except by creating a sentiment in favor of them, and how can this be accomplished except by educating the public?

We believe that all who have given the matter careful consideration will agree that some kind of an educational campaign is necessary. Just how the campaign should be conducted may be debatable ground, but at present that matter rests in

the hands of a committee of members who have had long experience and good judgment, and it is probable that the matter may safely rest where it is.

The problem which confronts this House of Delegates, therefore, is the method by which this highly important work shall be financed. It should be understood that this work must go on year after year if the public is to be protected against fraud, ignorance and quackery, and if the medical profession is ever to receive proper recognition for all it has accomplished for suffering humanity. To continue this work means that we must continue to expend a certain amount of money each year.

Two methods of raising these funds will probably occur to you. First, an increase in dues paid to the State Association. The justness of this method will undoubtedly appeal to you, as we all owe an equal debt to organized medicine. It should be remembered, however, that should this plan be adopted we have much work yet to do in converting many of our members to the idea. Second, to continue with voluntary subscriptions. This will very likely be objectionable to many, on the ground that a few will contribute in amounts the majority cannot meet without a sacrifice, and their failure to do so might place them in an undesirable light. Others may argue that it is undemocratic for the few to carry the burden of the many.

If we may be permitted, we will again refer to this matter, in a supplemental report, but for the present we will leave it with you.

Respectfully,

W. Burton Thorning, Chairman.

Referred to the Reference Committee on Reports of Officers and Committees.

The President: The next order of business is the report of the Council on Legislation and Public Instruction.

The Secretary then presented the report of the Council on Legislation and Public Protection, as follows:

Report of Council on Legislation and Public Instruction.

We were instructed last year, by the House of Delegates, (1) to oppose legislation providing for any system of multiple boards of medical examiners, or any modification of the present Medical Practice Act tending to permit the practice of any part of medicine on a substantial basis, and to cooperate fully with any proper agency in defeating any such efforts: (2) to conduct a campaign of education on the whole problem of the practice of medicine, the status of cults and sects in medicine and the effect on public health of quackery and medical incompetence, whether through ignorance or the desire to defraud; (3) in conducting such a campaign, to first inspire the medical profession, then gain contact with the public in the most efficient manner possible, following with the organization of public health societies after plans previously made by the Board of Councilors, and (4) to join with the State Board of Health and other agencies, in so revising our public health laws, including those pertaining to mental hygiene and the care and treatment of the insane, as to make them effective and practical. We have endeavored to carry out these instructions.

It will be recalled that the Council on Legislation and Public Instruction was reorganized and its membership increased from 5 to 12, including in this number the President and Secretary of the State Association, and the Chairman of the Board of Councilors, as ex-officio members. The following is the personnel of the Council: Ex-officio—Drs. A. C. Scott, Temple; Holman Taylor, Fort Worth; W. B. Thorning, Houston; for three years—Drs. A. A. Ross, Lockhart; M. F. Bledsoe, Port Arthur W. B. Russ, San Antonio; for two years—Drs. Joe Becton, Greenville; S. E. Thompson, Kerrville; A. F. Beverly, Austin; for one year—Drs. C. M. Rosser, Dallas; I. C. Chase, Fort Worth; H. W. Cummings, Hearne.

LEGISLATIVE.

It will be recalled that at the time of our last annual report, the much discussed amendments to the Medical Practice Act, proposed by the Board of Medical Examiners and endorsed by the State organizations of the several so-called schools of medicine, had been enacted into law. The Legislature was in session at the time of our meeting, hence the whole story could not be told in our report. The March Journal of last year, was called to the attention of our members as containing full information as to the attitude of legislators towards medical and public health legislation. In addition, attention is now directed to the June and July numbers of the Journal, the former containing the report of this committee, and the latter much valuable information pertaining to further attempts at chiropractic and public health legislation, and an illustrated writeup of our friends in the Legislature.

The Governor resisted the importunities of the chiropractors to submit to the called session the subject of chiropractic legislation until May 2, when he included the following in a message to the Legislature, which, while probably not so intended, gave the chiropractors the opportunity they desired (italics are ours):

"It is said that 75,000 citizens of Texas a year die from preventable diseases. The health of our people is of prime importance, and nothing should be left undone in the State looking to the protection of the people from disease and *from the inefficiency and incompetency of those who assume the responsibility of treating preventable diseases.* All such owe a duty, not only to the individual treated, but to the public generally. In the crusade in behalf of a healthy and able-bodied people, the Health Department should lead the way in sanitation and in the elimination of preventable diseases. *The State Health Officer should be paid a salary commensurate with the responsibilities of his far-reaching duties.* The present bureaus and board now constituting a part of the Health Department should be abolished and the State Health Officer should constitute the one directing head of that department, responsible for all things pertaining to the work of that department. The present law in regard to commissioners courts employing county health officers and nurses should be amended so that these respective officers should be employed by the commissioners court for full time, under the general direction of the State Health Officer, with compensation in keeping with duties performed. *The present Medical Practice Act should be amended authorizing the Board of Medical Examiners, or some other established and recognized board to cancel the license of doctors who constantly and persistently fail and refuse to furnish the State Health Department birth and death certificates, and who fail and refuse to report contagious diseases treated by them.*

"In connection with the foregoing thought, there is hereby submitted to you for your legislative consideration, the *entire renovation of the present Health Department,* the passage of such laws as will *stay the destructive march of preventable diseases,* the passage of such other laws as will *make more efficient the work of the State Health Department,* the treatment and prevention of diseases, and make more effective the health and sanitary conditions in the municipalities and counties of the State."

This, of course, let down the bars with a vengeance, and forthwith and immediately Senate Bill 58 by Senators McMillan, Watts and Rice, and

House Bill 140 by Representatives McNatt, Lewis, Wilmans, Rice, Burmeister, Collins and Turner, were introduced, providing for the licensing of chiropractors, and all that goes with it, practically as before. While it is our opinion that the Governor had no intention that this legislation should be undertaken, and that he would have disapproved any law of the sort enacted under these conditions, we must admit that in his zeal and his desire to improve health conditions in the State he used such language that the Legislature could hardly refuse to consider any chiropractic bill introduced.

This additional burden was borne cheerfully, however, in view of the great service the Governor and the Legislature had rendered the cause of legitimate medicine, in the correction of the long recognized deficiencies in Medical Practice Act, and while we were greatly handicapped in our efforts to defeat this legislation by the near approach and the actual progress of our annual session, through the support of our friends in the Legislature we were able to accomplish the deed, and again the day was saved. Both bills died on the calendar. There was only one test of sympathy, and it was hardly a fair one. The chiropractic bill was ordered printed in the House Journal by a vote of 83 to 26, which was heralded as a victory for the chiropractors. Those acquainted with legislative affairs understand that many times the courtesy of printing a bill in the Journal will be extended by those who are violently opposed to the bill itself. This was doubtless true in this instance, in view of the fact that several of the staunchest friends of the Medical Practice Act voted in the affirmative. Those who voted no were, Abney, Beasley, Bell, Carter of Hays, De Berry, Dodd, Fugler, Greer, Hardin of Erath, Hardin of Kaufman, Harrington, Hull, Jennings, Lackey, McBride, Mathes, Melson, Moore, Pate, Perdue, Danford, Shearer, Simpson, Stevens, Stewart of Reeves, Thrasher and Wallace. The list of those who voted in the affirmative is so long that we will not reprint it here.

It would seem that with this failure the chiropractors and their advisers would have been satisfied to rest for a time. However, such was not the case. On the very first day of the third called session, practically the same bill was introduced as a *revenue measure* (!) by Representative Collins of Dallas, Bird of Bosque, Howeth of Johnson, Wilmans of Dallas and Rice of Crockett. Evidently the proponents of chiropractic legislation despaired of inducing the Governor to again do or say anything which would advertently or inadvertently permit this class of legislation, and no time was lost in their effort to beat the chiropractic devil around the legislative stump. This being a revenue measure, it was not introduced in the Senate.

The measure was referred to the Committee on Revenue and Taxation. This committee reported the bill unfavorably, Representatives Melson, Culp, Satterwhile, Cable, Price and Mathes voting against it, and Representatives Johnson, Young, Smith, Baker and Fields voting for it. The bill was brought out on minority report, and killed in the House by the following vote:

Yeas (against the bill).—Abney, Avis, Baker of Milam, Beasley, Bell, Bonham, Cable, Carpenter of Dallas, Carpenter of Matagorda, Carter of Hays, Covey, Cowan, Culp DeBerry, Dinkle, Dodd, Durham, Finlay, Fugler, Gipson, Green, Greer, Hardin of Kaufman, Hendricks, Hughes, Hull, Irwin, Jennings, Lackey, Lane, McBride, McFarlane, McKean, Mathes, Maxwell, Melson, Merritt, Miller, Montgomery, Moore, Pate, Patterson, Perdue, Pinkston, Pool, Price, Quaid, Satterwhite, Shearer, Shires, Simpson, Smith, Stewart of Galveston, Stroder, Teer, Thrasher, Wallace, Williamson, Wilson.

Nays (for the bill)—Amsler, Atkinson, Baker of Orange, Barker, Bryant, Burmeister, Carson, Collins, Davenport, Davis, Downs, Driggers, Duffey, Dunlap, Dunn, Fields, Harris, Henderson of Marion, Henderson of McLennan, Howeth, Johnson, Laird, LeStourgeon, McDaniel, Martin, Morgan of Liberty, Pope, Quinn, Rice, Rogers, Russell of Callahan, Russell of Trinity, Sanford, Sparkman, Stell, Stevens, Stewart of Edwards, Storey, Thompson, Turner, Vaughan, Wells, Wessels, Wilmans, Young.

Ex-Senator Quentus Watson represented the proponents of the bill, and Representatives Davenport and Burmeister made the principal fight for it. Representatives Melson, Price, Hardin of Kaufman, Lackey and Kimble, led in the fight on the measure. Mr. C. L. Black of Austin, delivered an able argument before the committee, on the legal status of the bill, in support of the contention of its opponents that it was not a proper measure, under the call of the Governor.

Subsequently, in the same session, several measures were introduced for the taxing of physicians, in view of the need by the State of a little ready money. The Council resisted these efforts, not on the ground that the medical profession should not be taxed, but rather that it was unfair to add to the tax already borne, in that the great majority of the indigent poor of the State are, under the present system, cared for by the medical profession without remuneration of any character whatsoever. It was felt that this constituted sufficient tax to satisfy anybody. These bills were introduced by friend and foe alike. Fortunately, they included other professions and occupations, which insured their defeat.

A serious effort to revise the State Board of Health and Health Department laws, was made. Senators Clark, Cousins and Fairchild, introduced a bill providing for a board of health consisting of seven members, each of whom should be a duly licensed physician and authorized to practice medicine in Texas; with overlapping terms of office, of six years each; appointment to be by the Governor and vacancies filled by the Governor; the State Health Officer to be appointed and controlled by the Board; the salary of the State Health Officer to be $5,000 per annum; salaries of heads of bureaus to be $3,600; members of the Board to serve without pay, except for a per diem of $10 while attending to State business; the Board to have full authority in the matter of consolidating and extending Bureaus. This bill passed the Senate, with numerous changes, some of them objectionable but not particularly so. The Council gave the measure its support throughout. Because of lack of time, the bill died in the House.

ENFORCING THE LAW.

Immediately that the Medical Practice Act bill became a law, inquiries began to reach the office of the State Secretary, as to what the medical profession proposed to do about its enforcement. Anonymous letters from chiropractors and others inhibited by the law, insisted that enforcement was an impossibility and that the "Medical Trust" did not dare tackle the job. The Council had no idea of attempting to enforce the law. That happened to be the business of established agencies over which it had no control. It was not deemed advisable to place the medical profession in the attitude of persecution or even prosecution. Following much deliberation, the following statement of policy in this regard was adopted by the Council:

"The Council on Legislation and Public Instruction of the State Medical Association, representing the great majority of the legal practitioners of medicine in the State, congratulates the public upon

the protection which it is soon to receive from the Medical Practice Act, and calls the attention of the public to the fact that the enforcement of this law is the prime responsibility of the law enforcement officials of the State, and only secondarily the responsibility of the medical profession as such. However, because of the intimate knowledge the medical profession is in possession of, as to the harm likely to be done by the class of practitioners usually seeking to practice medicine without the sanction of the law, the Council desires to place the reputable physicians of Texas at the disposal of the courts and the officers of the law in the enforcement of this act."

Thus the attitude of legitimate medicine in this regard was established beyond any doubt, and thus the assistance of the medical profession was pledged to those who would enforce the law. It was a clear-cut, dignified pronouncement.

Inquiries continued to come in, from medical and lay sources as well, and the Council, in compliance with its pledge of assistance, called upon our General Attorney for a letter of instruction as to procedure, in the matter of prosecuting violators of the Medical Practice Act, no matter from what angle. A most excellent discussion of the problem was forthcoming at once. The instructions were printed in pamphlet form, and they have been supplied to all inquirers. The law itself had previously been reprinted in pamphlet form, and these were also made available to those who desired them.

The violations of this law continued to be glaring and the violators daily became more insolent. The State Board of Medical Examiners, answering to the call from all sides, organized a conference for the purpose of considering its enforcement, to which conference was invited the State Board of Health, all health officers and health boards and the several State organizations of the so-called schools of medicine interested in the law. The Council, together with other representatives of the State Medical Association, participated in this conference and joined in calling upon the State Board of Medical Examiners and the State Board of Health, jointly, to insist upon the enforcement of the law, pledging such assistance as might be necessary. A temporary organization designed to promote the enterprise in hand, was perfected. To this conference in the future will be invited all organizations interested in the public health, and an effort will be made to make the organization efficient.

PUBLICITY AND EDUCATIONAL CAMPAIGN.

The purpose of enlarging the Council was to provide the personnel for carrying on the educational and publicity campaign ordered by the House of Delegates at the last Annual Session. Immediately upon its reorganization, the Council took this matter under advisement and, following numerous conferences, adopted the following outline of procedure: (1) Raise the necessary funds through the Board of Councilors, rendering such assistance as may be necessary; (2) coincident with the effort to raise funds, begin to enthuse the medical profession and educate those who are to represent the medical profession in the campaign on the platform; (3) organize a Speaker's Bureau, comprising as many public health speakers as there is reason to believe will be effective before the public; (4) place in the hands of the speakers selected, synopses of addresses along agreed lines, together with material necessary to fill out an address to the lay public; (5) decide upon the exact date of launching the campaign, and purchase extensive space in the metropolitan dailies in which to announce the position and the platform of the medical profession and its intentions in this movement, to be released in each community on the day of the opening of the campaign in each said community; (6) follow with addresses in the smaller communities as rapidly as they can be arranged for and made, utilizing the press of the several communities appropriately; (7) follow this principal effort with addresses on subjects pertaining to public health, always working in the principal points made in the preliminary and comprehensive addresses bearing on the relationship of the medical profession to the public, and the importance of an educated medical profession, from the viewpoint of the public."

This procedure was begun at once, and is being worked to at the present time. The Board of Trustees readily granted the Council a credit of $1,000 to begin with. The Board of Councilors took up the matter of raising the necessary funds. The amount raised in this manner will be stated in a supplementary report. The House of Delegates suggested a fund equal to a per capita of $5.00. Figured on this basis, scarcely more than 50 per cent of the necessary money has been raised at this writing (April 19). The date of launching the campaign hinges upon the collection of funds. The Speaker's Bureau is in process of organization and the address has been variously outlined. These two items will be completed by the time the necessary funds are in hand. The character of newspaper publicity is receiving the attention of the Council at the present time. The concensus of opinion at the present time seems to be that there shall be no newspaper propaganda, in the ordinary understanding of the term. The principal publicity item will be a dignified, comprehensive but brief announcement of the forthcoming campaign and the purposes of the medical profession in its prosecution. There will likely be material of a helpful character as pertains to public health, but the amount of such material and the method of its presentation, will be determined very largely by local conditions. County societies have, by circular letter, been requested to furnish the Council with certain necessary data pertaining to the campaign.

In a conference with the Board of Trustees, it was decided to handle the funds of the Council in the same manner those of the Council on Medical Defense are handled. Money is deposited with the Treasurer through the office of the State Secretary, and is paid out upon orders of the Council, or upon vouchers signed by the chairman and the secretary. These funds will be audited with the other funds of the Association, and properly accounted for by the Board of Trustees.

To insure coordination of effort, the publicity and educational campaign will be conducted from the office of the State Secretary. In order to enable this office to handle the additional work, and in order to avoid organizing another force, which would otherwise be necessary, the Council has employed an assistant to the State Secretary-Editor (Dr. D. R. Venable) and an advertising and business manager (Mr. Jeff Reese). The Trustees have employed an additional stenographer. With this force it is believed that the task will be handled expeditiously. Mr. Reese, who has had considerable legislative experience, and who represented us at Austin during the several sessions of the last legislature, has been placed in charge of the political files of the office. He is well informed and able to advise the profession on all legislative and political matters. In his journeys over the State, looking after the business interests of the JOURNAL and the Association, he will find time to confer with county societies on this important phase of our work. It is believed that the Association will

wield an influence much more potent and practical if it is known that legislation is to be anticipated and handled in a consistent, businesslike manner. At the proper time, the Council will cause to be published its estimate of the political and legislative situation. It will be authentic and illuminating. Perhaps a supplementary report will be made during this session, covering these matters.

It behooves county societies to give immediate and close attention to politics, particularly to the election of legislators. It is our understanding that the chiropractors are exceedingly busy in this particular. Recent newspaper dispatches are to the effect that a bill providing for a board of chiropractic examiners, such, we presume, as those introduced in the last session of the Legislature, was distributed at their state convention. At that time a representative of their national organization, again according to the newspapers, made the flat statement that the Medical Practice Act, as recently amended, could not be enforced in Texas, for the reason that public sentiment was not behind it. The endeavor is, of course, to put public sentiment behind the chiropractic bill, and against the Medical Practice Act—in other words, a backfire against the campaign of publicity and education to be conducted by the State Medical Association. In this connection, perhaps it will be of interest to know that in some localities chiropractors are circulating petitions, praying that grand juries withhold indictment of those of their number charged with practicing medicine without a license, until the State Legislature can have an opportunity to pass a special law for their relief. We assume that these petitions do not carry the collateral information that the 38th Legislature had numerous opportunities to pass such a law, and even to exempt the chiropractors from the Medical Practice Act, but neglected them. It is said that a stitch in time saves nine. If that is true anywhere, it is true in politics. And it is in the sea of politics that legislation, beneficial and otherwise, is to be found. If we expect to salvage anything more than driftwood, we will have to wade in and go to it.

RECOMMENDATIONS.

It is recommended:

1. That the position of the Association in its opposition to any system of multiple boards of medical examiners, or separate standards of requirements for those who would treat sick people, and for a consistent, high educational requirement, be reiterated, with emphasis.

2. That the campaign of publicity and education be launched at once, effective provisions being made for the necessary funds.

3. That the plans of the Council, as outlined in this report, be approved and a vote of confidence extended the Council.

4. That the Council be directed to continue in its co-operation with the State Board of Health and other organizations interested in the public health, in the matter of revising and improving the laws of this State pertaining to the public health, including the care and treatment of the insane.

Respectfully submitted,

A. C. SCOTT, Chairman.

HOLMAN TAYLOR, Secretary.

Referred to the Reference Committee on Reports of Officers and Committees.

The President: The next is the report of the Council on Medical Defense.

Dr. W. D. Jones of Dallas, presented the report of the Council on Medical Defense, as follows, with appropriate comments:

REPORT OF THE COUNCIL ON MEDICAL DEFENSE.

The Council submits its tenth annual report, as follows:

It has been the custom of the Council to hold its meetings twice a year, at points and times when it is most convenient for its members and of least expense to its funds. Therefore, for the past few years we have held one meeting at the close of the Annual Sessions of the State Association, and the other on the morning of the first day thereof, which makes it quite convenient and quite a saving to our fund.

It will be seen from the auditor's report that this fund is gradually growing, in spite of the fact that expenses have increased and attorneys cannot be secured as reasonably as they could at the time of the creation of this department eleven years ago.

It has been very interesting to notice the sporadic increase in damage suits for malpractice at different times. Our report this year will show that only five new cases have been filed and reported to the Council, or the State Medical Association. Whether our members are failing to report troubles of this kind, we are not able to say. However, if they are failing to so report, or even to report threats of suits, they are doing themselves a great injustice. We have found that a letter to the secretary of the County Society where such threat is being made, often prevents the actual filing of a claim.

Of the cases that are reported and of which we take charge, it is seldom that we can get the details of the cause of action. We urge that any one so unfortunate as to be sued, immediately notify a member of the Council, and send him a copy of the facts in the case. We need this for our files, and it will be valuable in the future to know just what the majority of the claimants allege against the medical profession.

Our General Attorney reports 23 old cases pending; that is, cases that had been reported up to our last Annual Session. Since his report, however, one of these cases has been tried and resulted in a verdict for the defendant, leaving 22 of these cases still pending. However, as stated in our last report, the majority of these cases, we estimate three-fourths, will never come to trial and will be dismissed.

Five cases have been disposed of since our last report, two of which were compromised. We have now pending 26 cases, covering alleged negligence in obstetrical cases, club foot cases, cross action, nose operations, finger operations, fractures, x-ray burns, leaving sponges, appendectomies, eye operations, administration of intravenous neosalvarsan and negligence in extracting a tooth.

One of the new cases filed, a cross action for damages in a suit by the physician for the collection of his fee, resulted in an adverse judgment. An appeal is comtemplated.

Two chiropractors have recently been convicted of violating the Medical Practice Act. That law has stood the test in the Court of Criminal Appeals, and these chiropractors are attacking the injunction feature through the civil courts. We have authorized the County Society Secretary in this county to secure any additional legal help they may desire or need to protect this feature of the law, as it is absolutely essential to its effectiveness.

It is a great satisfaction to your Council to report our success, with the small amount collected from each member for this fund. In other states medical defense is being abandoned, or the dues are being raised in order to carry on the work. It looks as though we will be successful, even on the small amount we collect per capita, in carrying on this

work indefinitely, and we will progressively enlarge our field of co-operation with the component county societies, in many ways.

Again we commend our membership for their co-operation and support.

We also express our sincere appreciation of the valuable services rendered by our General Attorney, Judge Freeman, of Sherman, who is called upon by the members of the Association frequently, even without the knowledge of this committee. He always responds, giving valuable data and information, promptly and freely.

Respectfully submitted,

W. D. Jones, M. D., Chairman.
Holman Taylor, Secretary.
A. P. Howard.
F. P. Miller.

The report was referred to the Reference Committee on Reports of Officers and Committees.

The President: We will now have the report of the Committee on Scientific Work, Dr. J. J. Terrill, Chairman.

The Secretary: With your permission I will introduce this report for Dr. Terrill. He can make remarks concerning it after awhile.

Report of Committee on Scientific Work.

It appeared to be the concensus of opinion in the House of Delegates last year, that the Committee on Scientific Work should function as a "Council," assuming rather widespread jurisdiction. The suggestion that this committee be made a Council, with overlapping terms of office for its personnel, and with the increased scope, was referred to the Committee on Revision of Constitution and By-Laws with the approval of the House of Delegates. Accepting this opinion, we have undertaken to co-operate with such of the scientific agencies of the Association as we could come in contact with.

Our one accomplishment has been the closer co-ordination of the scientific sections, the credit for which we desire to very largely extend to the officers of the said sections. The conclusion was reached, by the committee and the section officers, in conference, that scientific papers should be limited according to the following schedule:

Section on Medicine and Diseases of Children, 25; Section on Surgery, 25; Section on Ophthalmology, Otology, Rhinology and Laryngology, 20; Section on State Medicine and Public Hygiene, 20; Section on Gynecology and Obstetrics, 18.

It was further decided that each section should have a paper on cancer, so designed as to meet the requirements of the section. It was agreed that the recently amended By-Laws pertaining to the presentation of papers to the Association should be rigidly enforced, and that prospective contributors to the program should be required to submit their papers to section officers in advance of their acceptance.

Anticipating that the By-Laws of the Association will be changed, and that this committee will have new work cut out for it, we have not attempted to definitely accomplish any other task. It is our opinion that a committee of this sort, comprising competent and suitable personnel, can accomplish a great deal in directing and coordinating the scientific work of the Association and its component county societies, and it is recommended that the thought be worked into practical form at the earliest possible time.

Respectfully submitted,

J. J. Terrill, Chairman.
E. V. DePew.
M. D. Levy.
C. T. Stone.

Referred to the Reference Committee on Scientific Work.

The President: The Committee on Collection and Preservation of Records, Dr. Frank Paschal, of San Antonio.

Report of Committee on Collection and Preservation of Records.

Your committee is pleased to report that very satisfactory progress has been made during the past year. In compliance with our request, the Board of Trustees appropriated $250 for the purpose of securing historical data from the archives in the State Library. Quite an amount of interesting material has been secured, although only about half the sum appropriated has so far been expended. The work is still being done by the Archivist, and it is probable that the sum appropriated will cover the data that will be of interest to us.

We realize that to assemble this and other data, and put it into proper form, will take time, labor, intelligence and persistent work. We respectfully make the following recommendations:

1. That the Committee be instructed to continue its work of gathering data.

2. That in the event the balance of funds on hand be insufficient to complete the work of the Archivist of the State Library, a small additional appropriation, not to exceed $250, be made by the Board of Trustees. The appropriation could be made out of the $2,500 that the House of Delegates recommended be set aside for a Medical History of Texas about three years ago.

3. That the Board of Trustees confer with the State Secretary, as to the approximate cost of the work of compiling and publishing the contemplated history, and whether it would be wise to undertake the task at this time, with the material on hand, and if it can be done satisfactorily, and at a reasonable cost, they be authorized to enter into a contract with Doctors Taylor and Chase to do the work.

Respectfully submitted,

F. Paschal, Chairman.
J. D. Osborn.
M. L. Graves.
S. P. Rice.

(At this juncture Vice-President Dr. J. N. White was called to the chair).

Dr. M. L. Graves of Galveston: As a member of this committee, I would like to say a word. I believe the members of this Association do not know how much of a debt they owe to Dr. Paschal, particularly for his work in collecting and preserving the records of the medical men of this State, for their historical value. For years he has been engaged in this work, and last year, at the meeting of the Ex-Presidents' Association, he presented, for preservation in our archives, the picture of President Anson Jones, of the Republic of Texas, who was a practicing physician in the lower portion of this State, together with a history of his activities.

Tomorrow I shall have the pleasure of presenting to the Ex-Presidents, for this same purpose, a picture and a history of the first signer of the Texas Declaration of Independence, who was a doctor, living at the time in Montgomery county, Texas, a picture of his residence, and the original license that was granted to him by the State of South Carolina, in 1835, to practice the profession of an apothecary. On May 4th, 1835, he was granted a license to practice medicine in Texas, by the Mexican authorities.

It is the collection and preservation of such records as that, and more modern records, of course, as pertain to the medical profession, that this par-

ticular committee is interested in, and we would thank any of you for information leading to the discovery of such evidence, for presentation at a future date.

Referred to the Reference Committee on Reports of Officers and Committees.

Vice-President White: The next to report is the Committee on Memorial Exercises.

REPORT OF THE COMMITTEE ON MEMORIAL EXERCISES.

Dr. A. A. Ross of Lockhart: We will hold the memorial exercises tonight, according to the program, at the Travis Park Methodist Church. Dr. Cummings is Chairman of the committee, but I don't see his shining pate anywhere. I have nothing to report, except to say that this ceremony of ceremonies will be held tonight and we ought to have a respectable attendance. Some one said here, that the last thing we can do for those who have gone on before is to pay a tribute to their memory. Dr. Cummings will deliver the address, and as he is not here I believe I will say that you will find it worth while to listen to it.

Vice-President White: Next is the Committee on Transportation.

The Secretary then presented the report of the Committee on Transportation, as follows:

REPORT OF COMMITTEE ON TRANSPORTATION.

Your committee has again succeeded in securing very advantageous terms of transportation to our Annual Session. The "Identification Certificate" plan has been granted, the rates are one and one-half fare for the round trip and tickets will be on sale April 27-29, with return limit May 4. Having established ourselves in the right to the identification certificate plan, there seems to be no trouble in securing it each year. We feel that our members should be duly appreciative of this favor, for it is a favor, in that it saves time and trouble to members who desire to take advantage of the rates. The member purchases his round trip ticket, and is not bothered any further.

Notwithstanding poor success heretofore in organizing parties for the annual sessions of the American Medical Association, your committee has agreed to make the effort once more. The railroads were anxious to get under the proposition, and we concluded that we had nothing to lose. The JOURNAL had secured advertising contracts from two of the systems leading to Chicago, and as the route thus formed is perhaps the choice route to Chicago from a large part of Texas, any way, we have selected it as the "Official Route." In fact, we have in effect joined the Dallas County Medical Society in the use of the M. K. & T.-Wabash, via St. Louis. The plan and schedule suggested is as follows:

Organize parties at San Antonio, Houston, Fort Worth and Dallas, with consolidation at Dallas, into as many Pullmans as may be necessary.

Leave Dallas at 8:00 p. m., June 7; arrive St. Louis at 7:51 p. m., June 8; leave St. Louis at 11:52 p. m. (Wabash), June 8; arrive Chicago, 7:50 a. m., June 9.

There should be no trouble in securing a special Pullman at each of the focal points mentioned. The connection at Dallas will be with a train that will permit the use of passes. The slight delay over the fast train is of no particular consequence; if anything, it is an advantage, in that it saves hotel bill in Chicago the night of the 8th. An evening in St. Louis is allowed, which may be utilized in a variety of ways, and which serves to break the journey.

The sale of tickets will be on the certificate plan, and the rate will be one and one-half fare for the round trip. Members will purchase one-way tickets, at the full fare, taking certificate receipt from the railway agent. This certificate, signed by the Secretary of the A. M. A., and the joint agent at Chicago, will enable the holder to purchase ticket home for half fare. Summer tourist tickets may be purchased at a rate slightly in excess of that granted for this trip, which may be an advantage to those of our members who expect to continue their journey somewhat, perhaps in vacation or to the clinics.

The sleeper rate from Dallas to Chicago, will be $10.50 for a lower berth and $8.40 for an upper berth.

Respectfully submitted,

HOLMAN TAYLOR, Chairman.
R. L. RAMEY.
S. P. CUNNINGHAM.
BACON SAUNDERS.
CHAS. P. YEAGER.

Referred to the Reference Committee on Reports of Officers and Committees.

Vice-President White: Next is the report of the Committee on Scientific Exhibits.

The Secretary: I suggest that the reports that have been printed be referred to the reference committees this afternoon. If we wait until another time, it will be too late for the committees to consider them fully. This particular report contains some matters of importance, something new, and should be considered by this House of Delegates. Therefore, if there is no objection, I will take the liberty of offering the report.

REPORT OF COMMITTEE ON SCIENTIFIC EXHIBITS.

Your committee wishes to report that an exhibit has been secured and will be assembled in the lobby of the Gunter Hotel.

The Medical Department of Baylor University will show material from the various laboratory departments of that institution. This exhibit has been made possible through the efforts of the Dean, Dr. W. H. Moursund.

The American Legion Hospital, located at Kerrville, Texas, will present an exhibit consisting of photographs of the hospital; a very interesting collection of handcraft articles, made by patients, and material from the various laboratory departments. We are indebted to Colonel Cook, commanding officer, and his officers, for this valuable contribution.

Through the Secretary of this committee, Dr. Violet Kieller, plans were made to have an extensive and valuable exhibit from the Medical School at Galveston, but this project had to be abandoned because of lack of funds.

Your committee has been handicapped by lack of interest on the part of the general profession, due probably to the fact that very few state meetings have had Scientific Exhibits. Where the fault lies, this committee does not know. There can be no question but there is plenty of material in the State for such an exhibit. Your committee feels that properly prepared exhibits have a value almost as great as the papers on the programs of the various sections. Few of our members have the opportunity to see such material as should be in such an exhibit, and its educational value is correspondingly great. This is evidenced by the use of the moving picture and like methods, in presenting subjects for consideration. The eye is more valuable than the ear in grasping the details of a subject.

A scientific exhibit, well placed, should be a valuable method of educating the public, the importance of which is being broadcasted by our JOURNAL. We feel that the matter of an exhibit for each meeting, brought to a high degree of perfection, ought to be seriously considered by those in authority.

For your consideration, we call your attention to the following:

1. As to the matter of financing these exhibits. This year we have lost a valuable contribution from the Medical Department of the University of Texas, because of the expense. Packing, crating and shipping cost money. The entire membership reap the benefit. Who should bear the expense?

2. We submit for thought a proposal to make the Committee on Scientific Exhibits a more permanent affair, to be appointed for, say, five years, the chairman each year to be the member residing in the city in which the exhibit is held. Thus an experienced group would have control. The membership could be made larger, and should include representatives from the various schools and hospitals. The State Health Department and the Texas Public Health Association, should operate through this committee, and furnish exhibits for public instruction.

3. The State Pathological Society of Texas might be approached, as to whether that organization would be willing to assume responsibility for these exhibits.

Respectfully submitted,

DR. B. F. STOUT, Chairman.
DR. VIOLET KIELLER, Secretary.
DR. WILL HORN.
DR. W. W. WAITS.
DR. R. O. CURTIS.

(President Scott resumes the chair.)

President Scott: This report is referred to the Reference Committee on Scientific Work. The Committee on Medical Education will be heard next.

Dr. M. L. Graves of Galveston, then presented the report, as follows:

REPORT OF COMMITTEE ON MEDICAL EDUCATION.

The Committee on Medical Education desires to present its report as follows:

Undergraduate Medical Education.—During the year no inspection of the two existing Medical Colleges in Texas has been made, because both of them have been thoroughly inspected by the authorities of the A. M. A. and the Association of American Medical College, and their hospital facilities and operation have been investigated by the American College of Surgeons. Both of these institutions are in Class A, and offer approved facilities for young men and women desiring a first-class Medical Education. The Undergraduate Medical Education problem appears, therefore, to have been successfully solved in this State, as we are justified in expecting that both of these institutions will continue to develop and expand in harmony with the best ideals of American medicine. These institutions deserve the unqualified support of the physicians of Texas. This support is essential to their proper progress and development.

Postgraduate Medical Instruction.—The committee regards the wise development of a system of postgraduate instruction, efficient in character and available to all the physicians in Texas, as an outstanding educational necessity. For the past two years, short postgraduate exercises have been held at the Medical Department of the University of Texas, at Galveston, and at the Medical Department of Baylor University, at Dallas. The courses of each of these institutions last year were conducted for two weeks, and clinics, lectures, demonstrations and bedside conferences of the most satisfactory character, were held. Something less than a hundred physicians from the State attended the exercises at the two institutions. We have reliable information that similar courses will be offered at these institutions during the next two months; they will no doubt merit and receive widespread patronage. It must be remembered that the faculties of these two institutions have undertaken these additional burdens without compensation, solely for the benefit of the physicians of the State who desire to avail themselves of such opportunities. It will be remembered that this work was undertaken by the Universities at the request of the State Medical Association, through its Board of Councilors. We are greatly indebted to them for their generous cooperation and the high character of the service rendered.

Expressing, therefore, our grateful appreciation for the services of the past and those yet to be rendered by these two Universities, it is believed that efforts should be made not only to enlarge the character of this service, so that it may reach a wider circle, but, in addition thereto, to provide some form of extension post-graduate instruction, in various portions of the State, to meet its geographical requirements.

University Extension Postgraduate Courses.—University Extension Instruction of this character, is in successful operation in Michigan, Colorado, North Carolina and in several other states. It is probably impossible, however, for our Texas institutions, above named, to provide for these extension courses without some financial support, and possibly without some faculty increases. The teaching staffs at present are heavily burdened with work, and they can not undertake additional labors except on a very limited scale. It is suggested, therefore, that some plan be devised for the organization of counties into Extension Districts. It appears quite possible to organize teaching units from the Universities, assisted by local talent, in these various groups, for one or two day clinical periods, devoted largely to examination and diagnosis of medical and surgical cases. In North Carolina this is done by a group of physicians paying a stipulated fee, which goes to secure lecturers of distinction and ability. In Wisconsin the University Extension Courses are carried on without large expenditures, as the local profession always helps, merely paying the expenses of the visiting staff. It would be feasible to organize such teaching units in all the larger and medium sized cities, and perhaps in some of the most populous counties in the State. Perhaps a standing committee of the State Association could be appointed on Post-Graduate Medical Instruction, to take up this matter and devise an operable plan or plans.

Medical Progress.—At the recent session of the Annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals, held in Chicago, March 3, 4 and 5, all the sessions were attended by the President of this Association and the chairman of this committee. Medical Education was presented in an able manner by the foremost workers in the country. The report of Dr. N. P. Colwell, Secretary of the Council on Medical Education and Hospitals, showed that there had been admitted to the freshman classes of our medical colleges more than five thousand students each year during 1921, 1922 and 1923. About 17,800 students were matriculated in all classes in all the medical colleges of the country last year. It is expected that the present graduating classes will number about 3,800, and within a couple of years this number ought to reach 5,000 graduates per annum.

Medical Curriculum.—A very gratifying report was made by Mr. Abraham Flexner, Secretary of the General Education Board. Comparing medical education in America and Europe, he showed that the institutions of America were fully prepared to

give as good medical educational opportunities as any in the world today. He considers our best educational institutions rarely equalled abroad. He suggested early reclassification of our medical colleges, and hopes for great improvement in our clinical teaching and facilities. He deprecates the chaos existing in high school and college valuations, and believes that a more elastic curriculum could be inaugurated in our medical colleges, with advantage.

Proposals for changes in medical curricula were made. Of special significance was the suggestion of admittance of first and second year medical students to clinical instruction. This course is strongly advocated by some of the leaders of the profession and some of the leading teachers of the country. It is being tried out at the University of Pennsylvania in the freshman year, and in a number of the other institutions in the sophomore year.

Dr. Harvey Cushing, at Harvard, gives an elementary surgical observation clinic to freshmen, and thinks well of it. It is somewhat in line with the work of the French universities, though better organized. It will require further experience of many institutions to determine the wisdom and the limitations of such courses.

Periodic Health Examination—An innovation has been established in the University of California, by the creation of an Out Patient Clinic for periodic health examination, and medical students are instructed for this service. The proposal is quite limited at the present time, but its possibilities for the future are very great. It foreshadows the inauguration of systematic health examinations of all well persons at periodic intervals, to determine the present state of health and the necessity of medical, dental or other attention, for the preservation of health. It will be seen at once that this subject presents possibilities of very great development, although the present facilities of physicians and their present education, does not provide for efficient service to any considerable extent.

Similar efforts have been extensively organized in the State of Maine, under the auspices of the State Medical Association, which has invited and secured the co-operation of a large number of altruistic and business organizations of the State under the name of "Maine Volunteer Health Organization." It is composed of the Maine Medical Association, Maine Public Health Association, County Health Association, State Department of Health, County Medical Societies, National Tuberculosis Association, American Society for the Control of Cancer, American Public Health Association, American Child Health Association, National Committee for the Prevention of Blindness, the Federation of Women's Clubs, Associated Industries of Maine, State Dental Society, American Legion, State Parent-Teachers Association, Federation of Labor, State Nurses Association, and many others. Their organization is elaborate.

The State Medical Association furnishes speakers and general demonstrations at the annual meetings. Each county medical society devotes one meeting during the year to the subject. Health clinics are held and active propaganda covering the entire State, is actively carried on. The character of these examinations, as set forth by their official literature, is hereto attached.[1] The committee feels that this subject is of great importance, and must be carefully studied, with correct appreciation of its possibilities for the future, and its economic limitations for the present, and that the members of our State Medical Association should keep themselves informed as to its progress.

1. SECRETARY'S NOTE: Cannot well be published here; will be given to the Reference Committee in connection with the report.

Purposes of Medical Schools.—Medical schools are organized for the following purposes, emphasized by President Burton, of the University of Illinois: (a) Teaching; (b) research, and (c) service.

The whole object of medical education is to prevent, cure, and alleviate disease. Our medical colleges have not only developed large efficiency in teaching and research, but they inculcate the altruistic spirit of service in a most commendable way. Our profession is perhaps the foremost in the world in the enjoyment of these opportunities and privileges. Perfection has not even been approached by our teaching institutions and their teaching personnel, but gratifying progress is being made, and scrupulous determination for improvement is everywhere evident in our medical educational activities.

Very respectfully submitted,

M. L. GRAVES, Chairman.
H. M. LANHAM.
DRU MCMICKIN.
CALVIN R. HANNAH.
J. N. WHITE.

The President: This report will be referred to the Reference Committee on Scientific Work.

The report of the Committee on Hospital Standardization is next.

The Secretary: If there is no member of the committee present, I will assume the authority of introducing this report.

REPORT OF COMMITTEE ON HOSPITAL STANDARDIZATION.

This committee has attempted no concerted movement along the line of its duties, largely because of lack of funds and of opportunity. We have, however, individually inspected hospitals in our individual territory, and have conferred with the management of numerous hospitals in an effort to advance the general principles of hospital standardization. We feel that some good results have been accomplished in this manner. Our principal effort has been in cooperation with the American College of Surgeons. Through the efforts of representatives of the above named organization, 16 hospitals in this State, with 100 beds and over, and 5 hospitals with from 50 to 100 beds each have met the minimum standards. Four of the smaller hospitals have agreed to abide by the standards but have failed in minor details.

Respectfully submitted,

F. P. MILLER, Chairman.
H. R. DUDGEON.
J. J. CRUME.
CURTICE ROSSER.
CHAS. R. JOHNSON.

Referred to the Reference Committee on Scientific Work.

The President: The report of the Committee on Compensation and Health Insurance.

Dr. S. P. Howard of Houston, presented the report, as follows:

REPORT OF COMMITTEE ON COMPENSATION AND HEALTH INSURANCE.

This being a non-legislative year, we have not had to contend with any proposed changes in the laws governing these matters. Last year we profited much when the Legislature extended the medical attention period from two weeks to four weeks.

It has been suggested to your committee that a physician be placed on the Board of Adjustment, which is now composed of a representative of labor, a representative of the employer, and a lawyer.

Legislation for the adjustment of medical charges has been suggested, but that involves the matter of a legal fee schedule, which is dangerous ground to enter upon.

Owing to the employer's financial interest and responsibility in the case, the selection of the physician for his injured employees rests in his hands in a majority of the states. This is so in Texas. The employer, or insurance company, has the right to submit a panel of physicians to the Board at Austin, from which the injured must accept treatment. There has been, and now is, agitation in certain quarters on the part of the employees and the medical profession, to permit free choice of a physician to treat compensation cases. In the states where this is permitted, there are certain features objectionable to the medical profession, such as limiting the amount of medical liability to a given sum per case—for instance, in West Virginia, the limit is $200, and this must include hospital bills. Another objectionable feature is that the choice of other than recognized medical practitioners is permitted. Any effort to change the law in this State should be made with great care; matters may easily be made worse instead of better.

In some of the industrial centers—for instance, the Standard Oil Company of New Jersey, the work is being confined to company owned hospitals, where the physicians are employed, full time, and this is looked upon unfavorably by private practitioners. We have a like condition in railroad hospitals in this State, that has long been accepted. Unless or until modified, the present compensation laws must be accepted. The enactment of workmen's compensation laws has effected radical changes in our conception of medical practice, in that it has taken away from the private practitioner one of his oldest prerogatives, that of privileged communication between the physician and the patient, and has introduced into the situation an economic element which must be considered in all cases. The economic problems involved are of primary importance, in that the cost of compensation is in direct proportion to the type of injury received and the character of treatment given.

When these laws were enacted, the time for treatment and the amount of medical fees were much less than at present. They have been extended, in the light of experience, very largely as presented to your Legislature by our esteemed President-elect, Dr. Bledsoe.

All physicians, no matter what their peculiar situation, should be interested in this subject, and we would advise them to procure and read Research Report No. 61, Workmen's Compensation Acts in the United States, issued by the National Industrial Conference Board, No. 10, East 39th St., New York. This is the most complete information we have found on this subject.

A. Philo Howard, M. D., Chairman.
T. Richard Sealy, M. D.
W. D. Cross, M. D.

The President: This report will be referred to the Reference Committee on Reports of Officers and Committees. The next is the report of the Committee on Cancer. I believe that report is not ready. The Committee on Health Problems in Education, Dr. Frazier of Belton, Chairman.

Dr. J. M. Frazier of Belton, then presented the report, as follows:

Report of Committee on Health Problems in Education.

As Chairman of the Committee on Health Problems in Education, I beg to submit the following preliminary report:

A letter from Dr. John M. Dodson, Secretary of the Bureau of Health and Public Instruction of the American Medical Association, clearly outlined the work expected of our committee. (This correspondence is attached to and made a part of, this report.)

In compliance with Dr. Dodson's suggestions I have, after attending the sessions of the American Medical Association and the National Educational Association, in San Francisco, and by invitation of the President of the Texas State Teachers' Association, attended the annual meeting of that organization in Fort Worth, last November. After an all-day conference with the committee of the Texas State Teachers' Association on "Health Education," a report to the Texas State Teachers' Association was formulated, incorporating every suggestion of the American Medical Association and National Educational Association, and this report was unanimously adopted and approved by the State Association. (A copy of the report is attached to, and made a part of, this report.)

My reception by this committee was very cordial, and a hearty co-operation in the campaign of Health Education initiated by the State Medical Association, was pledged.

I also had a long and satisfactory conference with Dr. Geo. A. Works, Director of the Educational Survey Commission of Texas, March 28th, and he assured me of the interest of the commission in the work of the State Medical Association on health problems. I regret that his absence from the State will prevent him being present in person at our approaching Annual Session. His address on "Functions and Purpose of the Educational Survey Commission," is very enlightening and very largely along the exact lines suggested by Dr. Dodson of the American Medical Association.

I regret that the work of the individual members of our committee can not be co-ordinated until the committee meets at San Antonio, during the Annual Sessions. I have requested the various members of the committee to make personal surveys in their own counties, through personal inspection of their schools and by conference with the County Superintendents of Schools. I have personally visited and inspected many of the rural schools in Bell County, and have conferred with the efficient County Superintendent.

I find most of the schools with well constructed buildings and sanitary locations and environments, and some effort has been made to teach hygiene, especially in those schools that are receiving State aid. None of them have physical or medical examination or inspection of children, and very few of them direct physical education and athletics. I have made several health talks at schools, and before various clubs and organizations, to enlist their interest in the health of the community and the school. These talks are well received by teachers, patrons and students, and I feel sure will, in time, result in improved conditions.

In conclusion, the committee, in conjunction with Drs. Carl Hartman and W. A. Buice, Chairman and Secretary respectively of the Texas State Teachers' Association Committtee on Health Program in Public Schools, and Dr. A. H. Flickwir, President of the Texas Association of Sanitarians, beg to recommend as a preliminary report:

1. That the importance of teaching health habits to school children be recognized, along the lines indicated by Theresa Dansdill's Manual entitled, "Health Training in the Schools" (a copy herewith presented), which has the approval of the Texas Public Health Association.

2. That the State Department of Education be requested, in its annual recommendation to County Teachers' Institutes, to include such work on health

problems as the technique and subject-matter of teaching health habits; school hygiene and sanitation, and medical and physical examination of school children.

3. That by this action the combined efforts of the American Medical Association and the National Educational Association, in this direction be endorsed and co-operation with them urged.

4. That this committee be made one of the permanent committees of the State Medical Association of Texas.

Respectfully submitted,

J. M. FRAZIER, Chairman.

The President: I believe the work of this committee will be of tremendous importance in connection with our publicity and educational campaign, which is to begin soon. I believe this committee has prepared the way for us in several counties in which it has worked.

The report will be referred to the Reference Committee on Scientific Work. The report of the Committee on Revision of Constitution and By-Laws is next.

The Secretary then presented the report, as follows:

REPORT OF COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS.

This committee was created during the last session of the House of Delegates, upon recommendation of President Dr. Becton. The advisability of the proposed revision was accentuated by several officers and committees. It seems that there are, or were, some conflicts and numerous discrepancies.

It will be recalled that several amendments to the By-Laws were adopted at the time the revision was decided upon, which amendments relieved the situation complained of, to a considerable extent. The amendments referred to pertained to the transfer of membership from one county society to another; the presentation of papers before the scientific sections and the reorganization of the Council on Legislation and Public Instruction. The By-Laws as amended have been in operation for a year, and it is believed the changes have proven beneficial.

Our committee has had no conference. Its deliberations have been by mail. The greater importance of the proposed publicity and educational campaign has appealed to us as making it impracticable for our committee to enter into the thorough study of its problems necessary to success. It was thought that the publicity campaign would be out of the way in time to permit the committee to take up its work in earnest, and hold the number of meetings sure to be required to avoid immature conclusions. For reasons beyond our control, and not necessary to discuss here, the publicity campaign did not proceed as planned, and our committee finds itself without sufficient time for deliberation. It will be noted that the membership of the Council on Legislation and Public Instruction, and our committee, is largely identical. We request, therefore, that this report be considered as preliminary to another report, which will be submitted following a session of the committee, to be held the day preceding the annual session.

The following matters were referred to this committee, by the House of Delegates, last year:

1. That the Committee on Scientific Work be denominated "The Council on Scientific Work" and that it be made up of five members, the President and Secretary of the Association and three others, to be elected by the House of Delegates, for three years, with overlapping terms of office. The duties of this council to be, to handle all matters relating to scientific programs, scientific exhibits, post-graduate courses, scientific research, the scientific work of local societies and the scientific sections of the State Association.

2. That the captions of scientific sections be changed as follows: Section on State Medicine and Public Hygiene to be denominated "Section on Public Health; section on Opththalmology, Otology, Rhinology and Laryngology to be "Section on Eye, Ear, Nose and Throat"; Section on Medicine and Diseases of Children to become the "Section on Medicine," and the Section on Gynecology and Obstetrics to become "Section on Obstetrics and Gynecology," the second day of the program of which, each year, to be devoted to obstetrics.

3. The nomination of councilors by the districts which they serve, and the restriction of the service of councilors to not more than one consecutive term.

Your committee has secured for each of its members copies of the constitution and by-laws of the several constituent State Associations of the American Medical Association, and these have been carefully and comparatively studied. Each member of the committee has formulated more or less definite ideas as to revision, some of which are extremely radical, and several of which would be far-reaching. It would be impossible to adjust opinions, as already said, except these are deliberated upon, for which reason they will not be mentioned here. It is possible that some definite conclusion will be reached at the meeting to be held by the committee later on. If so, there will be definite suggestions in the supplementary report.

The following recommendations are respectfully submitted:

1. That the committee be continued, as nearly as possible with the same personnel. In suggesting its own reappointment, the committee calls attention to the amount of work already done but not correllated because of force of circumstances.

2. That the matters heretofore submitted to the committee, and referred to herein, be allowed to remain in the hands of the committee, and that no definite action be taken or any changes made in the constitution and by-laws, until this committee has had an opportunity to give the proposals some consideration.

Fraternally submitted,

A. C. SCOTT, Chairman.

HOLMAN TAYLOR, Secretary.

The Secretary: The committee desired that I present at this time the following supplemental report:

SUPPLEMENTARY REPORT COMMITTEE ON AMENDMENTS, CONSTITUTION AND BY-LAWS.

It has come to the attention of this committee that the House of Delegates will be called upon to determine whether or not the dues of the Association will be raised, and if raised to what amount. We have given careful consideration to the emergency that now presents itself and which would seem to call for additional funds, and it is the opinion of this committee that if the work of the Council on Public Health and Legislation is to be continued along the lines of publicity and education, it will be necessary to raise the dues, and not at all feasible to secure the funds upon a volunteer subscription basis. Therefore, and in order to meet constitutional requirements, the following amendments to the By-Laws are respectfully submitted for your consideration and action at the proper time:

Amend Chapter XI by substituting for Section 1, the following:

"Section 1. An assessment of $15.00 per capita on the membership of component county societies is hereby made the annual dues of the Association. Of this amount $2.00 shall be the subscription fee to the TEXAS STATE JOURNAL OF MEDICINE, $1.00 shall go to the Medical Defense Fund and $10.00 to the Publicity and Educational Fund."

Amend Chapter XI by adding the following section:

"Section 3. A fund to be known as the Publicity and Educational Fund is hereby established. This fund shall consist of $10.00 per capita, which amount shall be set aside by the Board of Trustees for the use of the Council on Public Health and Legislation. It shall be expended by order of the Council on Legislation and Public Instruction, and upon vouchers signed by the Secretary of the Association and countersigned by the Chairman of said Council. It shall be used for any purpose falling within the duties of the said Council on Public Health and Legislation and shall be used for no other purpose, except upon unanimous agreement of the said Council, unanimously approved by the Board of Trustees."

Amend the present Section 3 of Chapter XI by changing its designation to "Section 4."

It has occurred to this committee that the complete revision of the Constitution and By-Laws of the Association will be deferred (another year) unless there is a constitutional provision whereby complete revision may be accomplished at a specified time. Therefore, the committee respectfully suggests the following:

Amend Article XI of the Constitution by adding the following to Section 1 thereof: "Provided further, that a total and complete revision of the Constitution and By-Laws may be accomplished at any regular session, notice having been given of such intention in the House of Delegates in a meeting during the preceding session of the Association."

Respectfully submitted,

A. C. SCOTT, Chairman.
HOLMAN TAYLOR, Secretary.

Both reports were referred to the Reference Committee on Revision of Constitution and By-Laws.

The President: We will hear from the Texas Member of the National Legislative Council, our President-Elect, Dr. M. F. Bledsoe, of Port Arthur.

Dr. Bledsoe, then presented his report, as follows, with suitable comment:

REPORT OF TEXAS MEMBER OF THE NATIONAL LEGISLATIVE COUNCIL.

There seems to be no precedent for a report of the Texas member of the National Legislative Council. I shall, therefore, simply report, in brief, a few of the problems that have been under consideration.

In co-operation with Dr. Woodward, Executive Secretary, Bureau of Legal Medicine and Legislation of the American Medical Association, two important items, in which every physician in the United States should be interested, have received considerable attention.

First, the tax imposed on physicians under the Harrison Narcotic Act, exceeds the amount necessary to give the Federal government control of the dispensing and prescribing of narcotics. To the extent of this excess, it is an occupation tax imposed on the medical profession, and in so far as the tax is subject to this criticism it is an illogical and unjust tax.

Second, the Federal income tax law, as interpreted by the Commissioner of Internal Revenue, illogically and unjustly discriminates against the physician, in that it denies him the right to deduct as an ordinary and necessary expense of his profession, expenses incurred in attending medical meetings and postgraduate study.

As early as March 23rd, 1923, Dr. Woodward called to the attention of the Chairman, the Hon. Wm. R. Green, of the Committee on Ways and Means of the House of Representatives, both of these discriminations, and requested legislation or other action for relief. I was not appointed until January, 1924. Since that time, however, I have joined forces with the Chicago office, and have worked to bring about a proper adjustment. Correspondance was had with a number of Congressmen and United States Senators, and cooperation was freely promised. Our senior Senator, Morris Sheppard, took up the matter of the Harrison Narcotic Act with the Commissioner of Internal Revenue. I am quoting herewith reply of the Commissioner of Internal Revenue to Senator Sheppard:

"Dr. Bledsoe's protest against the amount of the tax imposed under the provisions of the Harrison Narcotic Law, as amended, upon physicians, is apparently based upon a misapprehension of the facts. The increase in the tax from $1 to $3 a year was designed primarily to meet the expenses of the government and incidentally, along with the other increases made, to provide an equitable apportionment of the liability as between the various classes taxed. The total collections made during the fiscal year ended June 30, 1923, in connection with the enforcement of this law, were $1,013,266.26. The cost of enforcement was $679,406.86, making an excess of $333,859.40. However, the amount above quoted as the cost of enforcement does not represent the total amount expended in the administration of the Act, as the cost of collection of taxes, engraving of narcotic special tax stamps and order forms, is paid from other appropriations, and while this cost is not segregated and available, conservatively estimated, it would approximate the amount of the difference of the above. Attention is invited to the fact that whereas the tax, irrespective of the character of the activities engaged in, was originally $1, the amended statute established five classes, the tax imposed ranging from $24 to $1 a year, based on the nature of their respective activities. The tax of physicians is only one-eighth of that of manufacturers, one-fourth that of wholesale dealers and one-half that of retail dealers. There seems, therefore, little basis for the contention that the tax of $3 involves a discrimination against the physician.

"The contention that the increase creates an occupational tax, which, if imposed upon physicians, should likewise apply to other occupations, ignores the fact that the tax is not upon the practice of medicine as a profession, but upon the dispensing of narcotics in connection with that practice. The tax is admittedly a special, occupational or excise tax, imposed upon the carrying on of certain enumerated activities, but these activities are confined to the traffic in narcotic drugs and there is no apparent basis for the view that the tax upon those engaged in these activities is inequitable or unjust merely because it does not also fall upon persons engaged along other lines of endeavor.

"It may be stated in this connection, that very few protests have been made against the special tax of $3 a year on physicians, which as indicated above, this department believes, under the circumstances to be a proper amount."

It is to be noted from the above, that the tax is admittedly a special occupational or excise tax imposed upon the carrying on of certain enumerated activities, but these activities are confined to the

traffic in narcotic drugs and there is no apparent basis for the view that the tax upon those engaged in these activities is inequitable or unjust merely because it does not also fall upon persons engaged along other lines of endeavor. In other words, from the interpretation of the Commissioner of Internal Revenue, every legally qualified practitioner of medicine, who finds it necessary to write a prescription for cocaine or morphine to alleviate pain, is trafficking in narcotics as a business and should bear part of the burden of the expense of enforcing the Harrison Narcotic Act. It would be just as logical and reasonable for the manufacturers who use alcohol in their business and the physicians who prescribe alcoholics, to be taxed an amount sufficient to cover the expense of enforcing the Volstead Act!

It is not necessary to bother you with any further comment. The answer is too obvious. Your attention is especially directed, however, to the last paragraph of the above quoted letter, that very few protests have been made against the special $3 tax. The matter is, therefore, submitted for your consideration, to be dealt with in whatever manner the House of Delegates may determine. I believe that protests in sufficient numbers should be made to the Commissioner of Internal Revenue, through proper channels, as an indication of how the medical profession feels about the matter.

With reference to the Federal income tax deductions of expenses of those physicians who desire to increase their professional knowledge and skill, to extend their professional acquaintance, and to improve the conditions under which they practice, and who attend from time to time meetings of medical associations and take courses of post-graduate study, it may be said that they pay the cost of this enterprise out of their gross professional incomes, and such benefits as they derive go toward increasing their subsequent incomes, thus reacting to increase the Federal revenues. But the Commissioner of Internal Revenue has somehow arrived at the conclusion that these expenses are of a personal nature, and therefore not deductible in computing the Federal income tax (Cum. Bul., Dec., 1921, p. 171, and June, 1922, p. 123).

This ruling might be reversed on appeal to the courts. No such appeal has been made because, although the burden imposed by these rulings is considerable, the burden on any one physician is so small that he submits to what he regards as an injustice, rather than subject himself to the expense, loss of time and annoyance involved in contesting the matter in court. It would seem, therefore, that an expression from the House of Delegates should be had on this matter, also.

Another matter that is of interest to the medical profession as a whole, but one on which I have no recommendations to make, is the extended activities in the treatment of private citizens by the Public Health Service of the United States Government. For your information, the following are beneficiaries of the Public Health Service, and are treated by its medical force:

"Those employed on board in the care, preservation, or navigation of any registered, enrolled, or licensed vessels of the United States, or in the service on board of those engaged in such care, preservation, or navigation.

"Seamen employed on yachts, provided the said yachts are enrolled, licensed, or registered as vessels of the United States.

"Seamen employed on United States Army transports or other vessels belonging to the United States Army, when not enlisted men of the Army.

"Officers and enlisted men of the United States Coast Guard.

"Officers and employees of the Public Health Service.

"Seamen employed on the vessels of the Engineer Corps of the Army.

"Officers, crews of vessels, keepers, and assistant keepers of the Lighthouse Service.

"Officers and seamen on vessels of the Coast and Geodetic Survey.

"Civil employees of the United States who are injured while in the performance of their duties.

"Officers and crew of vessels of the Bureau of Fisheries.

"Patients of the Bureau of War Risk Insurance.

"Patients for special study and investigations.

"Immigrant and immigrant seamen and foreign seamen are also entitled by courtesy to examination and treatment by this service, at the request of the immigration authorities or the Consul of the country concerned."

It is to be remembered, in this connection, that none of this vast body of men, except foreign seamen, pay one penny to the government for their medical attention. The seamen from foreign vessels pay a very small stipend through their governments, for their attention. I have not endeavored to ascertain the number of men treated by the government through this service. One does not have to draw on one's imagination very much, however, to appreciate that the number is very large.

Dr. Hubert Work, at the St. Louis meeting of the A. M. A., said: "Promiscuous medical treatment of diseases, however, is not a state's function and interference with it through any unit of government should not be tolerated by the public or by physicians. But in the last analysis, it will lie with physicians themselves whether or not states will treat the ambulatory sick they have quarantined. If physicians are not willing to do the necessary medical work, to become the agent of the State for that purpose, the State will have no option but to prescribe. The practice of medicine must remain a process of personal contact, invoking the patient's right of selection and the direct moral responsibility of the physician, with a sympathetic reaction between the two. An impersonal State cannot render an implied personal service. The weighing of the human elements of the sick, their individual relation and response to a disease process cannot be expected from a State's hired man, although practicing medicine. It would be equally logical for the State to hire itinerant preachers to hold services between trains, as to employ physicians on a salary to treat sick, by contract, only when ill." (Jour. A. M. A., Vol. 78, No. 21, p. 1641.)

This is, of course, a very large subject, and no one knows where it will end. The above is submitted as a matter of information. Your attention is directed, however, to the fact that the medical profession of Texas, so far as the records show have answered cheerfully every call of duty and rendered service in all instances of emergency, quarantine, etc. Just at this time, a physical and mental survey is in progress, perhaps now completed, of the penal institutions of this State, by the profession of the State, at no cost to the State. What bearing this record should have on the subject, is, of course, an open question.

Respectfully submitted.

MURFF F. BLEDSOE, M. D.

Referred to the Reference Committee on Reports of Officers and Committees.

The President: The Texas Representative to the National Council on Medical Education, will render his report.

Dr. M. L. Graves of Galveston, then presented his report, as follows, with appropriate remarks:

REPORT OF TEXAS REPRESENTATIVE, NATIONAL COUNCIL ON MEDICAL EDUCATION.

As the Representative of the Association, I attended, in company with President Dr. Scott, all the meetings of the Annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals, in Chicago, March 3, 4 and 5, 1924.

The program of the Congress was an interesting one, and included discussions of Medical Education in its various phases, licensure of physicians to practice medicine and legal requirements in the various states regarding same. The service and efficiency of hospitals and discussions of public health by authorities from all over the country, were interesting and enlightening.

Medical and Dental Education.—An important feature of the discussions related to closer cooperation in medical and dental education. It appears that there is a constant approach between these two professions, in their efforts to relieve human disease.

When it is remembered that Dr. Benjamin Rush, perhaps the earliest Professor of Medicine in the University of Pennsylvania, and one of the signers of the Declaration of American Independence, about one hundred and twenty-five years ago, described cases of epilepsy, indigestion, rheumatism and other diseases, which he attributed to diseased conditions of the teeth and mouth, and which he sent to dentists for relief, with successful results, it is amazing that these observations were unheeded for a century until the doctrine of focal infection was revitalized by Billings and Rosenow, less than twenty years ago. It seems unfortunate that dentistry is not a specialty in medicine, upon precisely the same basis as ophthalmology and otolaryngology and other specialties. Indeed, this position was advised in a report "On Suggestions on the Medical Curriculum, Including the Clinical Specialties in the Under Graduate Medical School." This report was read by the Chairman, Dr. Geo. E. DeSchweinitz, and was signed by Dr. Ray Lyman Wilbur, President of the American Medical Association, and of Leland Stanford University, and by Dr. Wm. S. Thayer of Baltimore, Dr. Walter R. Parker of Detroit, and Dr. Chas. H. Frazier of Philadelphia. If amalgamation of the two professions cannot be secured, it is essential for public welfare that they work in the closest cooperation.

Legal Requirements.—A very able paper was read by Judge Harry Eugene Kelley, of the Chicago Bar, "On the Regulation by Law of the Occupation of Healing Diseases of Human Beings." It gave a clarifying discussion of the laws of the various states, and court decisions on many vital questions affecting the legal practice of medicine.

The question of reciprocity was most ably discussed by Dr. T. J. Crowe, of Dallas, Secretary of the Texas State Board of Medical Examiners. He called attention to the inequalities of the rules and regulations of the various State Boards, which worked injustice upon competent and honorable practitioners, who had occasion to move from one State to another. It is hoped that uniform and equitable rules applying to all states will be the outcome of such discussions.

Hospital Efficiency.—The importance of hospitals, and the criteria by which their professional efficiency is to be judged, was ably set forth from the administrative, the financial, the professional and the social service points of view.

The necessity of post-mortem examination, with clear records, was ably presented as an index of professional hospital efficiency, by Dr. L. Hektoen of Chicago. The habit of insisting upon post-mortem examination wherever possible, should be formed by every hospital staff.

Technicians.—It was also set forth that hospitals are facing the necessity of employing technicians or non-medical clinical assistants, in order to meet their growing demands. The question is too indeterminate yet for any definite policy to be recommended by the Council on Medical Education and Hospitals. However, I desire to record my conviction that well trained technicians in our laboratories, x-ray, radium and pathological, are now a necessity, and some official provision should be made for their education or training by our educational institutions.

Many other suggestions of importance and interest were presented. Some of these will be elaborated in the report of the Committee on Medical Education.

I desire to express my appreciation of the honor of this appointment, and the pleasure of attendance upon the Congress.

Very respectfully yours,

M. L. GRAVES.

The report was referred to the Reference Committee on Scientific Work.

The President: The next is the Texas Delegate to the American Association of Medical Colleges, Dr. William Keiller of Galveston.

The Secretary then presented the report, in the absence of Dr. Keiller, as follows:

REPORT OF TEXAS DELEGATE TO THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

As your delegate to the Association of American Medical Colleges, which met this year in Omaha, Nebraska, February 28, 29 and March 1, I beg to submit the following report:

The discussion in this, as in one or two previous meetings, appeared to hang on an effort to get more correlation between the teaching of clinical and preclinical subjects, or clinical and fundamental subjects. The papers were so many and so carefully elaborated that it is impossible to give a general report which would be of much value.

The most notable paper of the first day was an account of the experiences of Dr. O. H. Perry Pepper, Assistant Professor of Medicine, University of Pennsylvania, in giving medical clinics to the first year classes. Dr. Pepper kept in intimate touch with the lectures on anatomy, physiology and physiological chemistry, and out of the wealth of clinical material afforded by the hospitals of the University, gave a clinic of one hour a week to freshmen, and one hour a week to second year students, on selected cases, illustrating the lectures of the week before in the subjects mentioned. For example, when freshmen students were studying the anatomy of the skull and its foramina, he showed a case of external ophthalmoplegia due to a secondary sarcomatous deposit in the wall of the lateral sinus. He also showed a case of septic meningitis, following middle ear disease, as illustrating the surgical anatomy of the roof of the middle ear. While the anatomy of the aorta was being considered, he showed a case of aortic aneurysm. When students were dissecting the lymph nodes of the neck, he showed several cases of tuberculous and other involvements of the lymph nodes of the neck.

While in physiological chemistry the acid-base balance was under consideration, he showed cases of acidosis. Cases of anacidity and achylia were also shown, as illustrating digestive disturbances depending upon deficiency of physiological secretions. When the physiology of the circulation was discussed, he

showed cases of heart block and cardiac cyanosis. Similarly, he had cases illustrating irregularities in basal metabolism.

Dean Miles of Cornell University Medical College, discussing the poor boy in medicine, came to the conclusion that the poor boy should generally be advised against studying medicine unless he could see his way to give his full time to study during the actual session, as it is impossible to give sufficient time to materially add to his resources and to do justice to the exceedingly heavy curriculum at the same time.

Dean Cutter of the University of Nebraska College of Medicine, discussing the basic principles of clinical teaching, stated that 80 per cent of medical graduates entered general practice; and bearing this in mind, that too much time is given in clinical teaching to discussing rare cases; too little attention is paid to the management of the cases; too little time is devoted to common, everyday subjects, and there is lack of training in therapeutics. He emphasized the importance of the outpatient department, and stated that it ought to be handled by the best men on the staff. Ward classes should be limited to 15 students; operative clinics should be open to a maximum of 15 students, and the large surgical clinics should be confined to pre- and post-operative presentation of the cases, much time being given to teaching the details of nursing, dietetic procedures, etc.

Dean Meyers of the University of Indiana School of Medicine, advocated the four quarter system as a means of increasing the available clinical material by 30 per cent, without additions to the physical equipment. In the discussion, Drs. Pepper and Cabot stated that this four quarter system was mainly a problem of personnel. In the four quarter system it is proposed that any three quarters constitute a teaching year, the sessions being from September to January and January to September, respectively.

Dean Schmitt of the University of California Medical School, discussing the fifth, or interne year, believed that the requirement of an interne year was a matter for the consideration of State boards, rather than medical colleges; that the medical college cannot require a fifth year for graduation as long as it is impossible for the medical school to supervise the interne year.

There was considerable discussion over the relative advisability of a nonrotating interneship as against a rotating interneship. Dean Edsall advocated a nonrotating interneship, while Dr. Colwell believed that a rotating interneship was better. The shortness of the individual services of a rotating service can be corrected by requiring 18 months' interneship instead of one year.

President Lyman Wilbur of Stanford University, presented the report of the Committee on Education and Pedagogics. The report was the conclusions by the Committee on Education and Pedagogics, dealing mainly with entrance requirements. The spirit of the report appears to be that while it was very necessary some years ago to lay down very definite rules for entrance requirements and curricula to Class A Medical Colleges, in order that all weak colleges might be eliminated, the elimination of the weak colleges having been effected, it was felt that more elasticity might be allowed than was before possible. The committee circulated the following interrogatory to the faculties of all Class A Medical Colleges:

"1. Since English is required by practically all colleges, that English be eliminated as one of the requirements for entrance to the medical school.

"2. That the amount of physics, chemistry and biology be reduced to a minimum, determined upon after careful study, and that where a student presents thorough training in one of these subjects, he be excused from the full requirement in the others.

"3. Can high school physics, chemistry and biology supplant the college requirements in these subjects?

"4. Is it possible for any student with an A. B. degree from a reputable college to be admitted without conditions to the medical school? It will be necessary for him to do a certain amount of outside study, but experience would indicate that such students have the capacity to make good.

"5. Should any student presenting evidence of having done good advanced work in any scientific subject during two or more college years, be admitted to the medical school without conditions?

"6. Should all language requirements be abolished?"

The answers to all the questions were overwhelmingly in the negative. Based on this report, the committee has made certain recommendations, which are somewhat more elastic than the present requirements.

On the morning of the 29th, time was given to visit the Laboratories of Anatomy, Pathology, Physiology and Pharmacology, of the University of Nebraska, and the Laboratory of Anatomy in Creighton Medical College. Certain clinics also were open to the visiting physicians.

In 1913 the University of Nebraska formally took over all instruction in medicine from the pre-existing Omaha Medical College. The State Legislature of Nebraska during the past years has appropriated more than three-fourths of a million dollars for the erection of laboratory buildings and a teaching hospital. The University Hospital, which is entirely controlled by the Medical College, and is strictly for teaching purposes, contains 130 beds.

I was especially impressed with the arrangement of the Department of Anatomy, which is divided into small compartments by slate partitions, leading to within one foot of the floor, the slate being used for drawing purposes. While I personally prefer the large, open dissecting room, this seemed an excellent arrangement where small, separate compartments are preferred.

I attended a ward round in surgery, where some postoperative cases were shown, and also an outpatient surgical clinic, which was conducted in a large amphitheatre by one of the leading surgeons.

Respectfully yours,

WM. KEILLER.

Referred to the Reference Committee on Scientific Work.

The Fraternal Delegates to the several organizations listed, were either not present or the bodies to which they were accredited had not met.

The President: Are there any Fraternal Delegates from other societies present? I take extreme pleasure in introducing to you Dr. Everett S. Lain, the President-Elect of the Oklahoma State Medical Society. (Applause).

ADDRESS OF THE FRATERNAL DELEGATE, OKLAHOMA STATE MEDICAL ASSOCIATION.

Dr. Everett S. Lain, Oklahoma City: It gives me more than usual pleasure to meet with you today, and to bring to you greetings from the Oklahoma State Medical Association, first, because I saw, for the first time, the light of day in this State, and practiced here for two years, with the usual number of errors of diagnosis and sincere regrets; second, because I have met with your membership in former medical meetings in your State;

also in medical meetings elsewhere. I have been meeting with your President, Dr. Scott, so frequently the past year—in October in the office of the Secretary of the A. M. A., Chicago, in March in Paul's Valley, Oklahoma, at a meeting of our State Cancer Campaign Committee, where he followed me in an address; again on this occasion. It reminds me of a story. A little girl was talking to a beautiful kitty that she had picked up in a neighbor's yard. She was telling the kitty how well she loved it, and expressing the fact that she knew its brothers and sisters; also, that she knew its mamma, although she never had met it's papa. She reasoned that the kitty's papa must be a traveling man, like her "dad!"

Gentlemen, I bring to you greetings from a seventeen hundred membership, a group of physicians as patriotic during the world war, and as brave as those of any State in the Union. We admit that you taught us how to impeach a governor, and many other things in politics, as well as medicine; though to Oklahoma we believe belongs a greater renown, the winning of three of the greatest battles within a period of three months and without the smell of gunpowder or the spilling of a drop of blood. Never before in history, either sacred or profane, has such been accomplished. During this period we were able, also, to hold the front page of nearly all the great dailies in the United States. First, we won the battle of the unprecedented floods of the Cimarron and the two Canadian rivers; second, we won the battle of the impeachment of Jack Walton, and third, we won the battle of the indictment of our State Health Officer, with his negro chauffeur.

Our State Medical Association is not so large nor so old as yours, although we are progressive in every respect. We were organized with a membership of twenty-nine, in the year of 1893. Now, in 1924, we have grown to a membership of seventeen hundred. I learn that your Association was organized in 1853, and now has a membership of thirty-seven hundred. You have in Dallas a great Medical Arts Building, the principal owner of which is a noble physician. We are now building in Oklahoma City a Medical Arts Building, owned and controlled by physicians and dentists. Upon the thirteenth floor of this building, we hope, within time, to establish a State Medical Library and General Headquarters and Club Rooms for every member of our Association. We are laying plans for a more prosperous and active year, and since we shall have a real President next year, in the person of myself, we should double our membership.

I hereby extend to you a most cordial invitation to visit us at any time after this building has been completed, and to make yourselves comfortable in this general meeting place for physicians. I more especially invite you to attend our State Meeting, May 13-15. We want you and will expect a large number of visitors from Texas. I know that you are tired after the arduous duties of the day, and I can see that you are becoming restless at this late hour of the afternoon. I will not talk long, for fear you will give me the signal, or "highball," that an old lady once gave a conductor. This conductor had the usual passenger upon his train in the person of a nervous old lady who, traveling for the first time, was going to see a married daughter in a distant city. The day was long and tiresome, and this old lady had repeatedly plied the conductor with inquiries each time he came down the aisle of the coach. Her series of questions pertained to the significance of the buttons and stripes (or decorations), on the conductor's uniform, and more particularly with reference to each station, when the train would stop, and just when it would arrive at Podunk, where her daughter, Sally, lived. Along late in the afternoon, when the conductor's patience had been worn threadbare, she observed something new for inquiry. Before the train pulled out from a station, the old lady, looking through a window, saw the conductor give a signal (or "high ball") to the engineer. When the former came down the aisle of the coach again, the old lady stopped him and inquired the significance of this wave of the hand. His patience being exhausted, he blurted abruptly that it was a signal, and that the signal was known as a "high ball," and meant to the engineer of the train to "Get to hell out of here!" The old lady said nothing more. The conductor passed on to the smoker and, having arrived there, began to reflect. His conscience began to trouble him for losing patience; he had violated his company's rules for courtesy. He resolved that the manly thing to do would be to return to the old lady and apologize. This he did. Then he begged her to forgive him for the rude language he had used. The only response made by the old lady was to repeat the "high ball," signal, the meaning of which he had explained to her.

The Secretary: By request of Dr. G. B. Fosque of Waco, I beg to introduce this resolution, pertaining to Dr. R. E. House of Ferris, Texas, of "truth serum fame." It is an effort to exonerate Dr. House from blame for the newspaper publicity that has followed his efforts.

The resolution was referred to the Reference Committee on Memorials and Resolutions.

The Secretary: Upon request of Dr. C. S. Venable of San Antonio, a resolution pertaining to the Citizens' Military Training Camp, is introduced.

The resolution was referred to the Reference Committee on Resolutions and Memorials.

The Secretary: Upon request of Dr. W. B. Thorning of Houston, a resolution amending the Constitution, is introduced. It is an effort to add a fourth member to the Council on Medical Defense, in order to allow a better distribution of the Council. It will have to lay over for a year.

The resolution was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

On motion of the Secretary, seconded by Dr. J. H. Gambrell of El Paso, the House of Delegates went into executive session for the purpose of hearing the message of the President.

At the conclusion of the executive session, the Secretary reported that the President's message had been referred to the Reference Committee on Reports of Officers and Committees, with instructions to make a separate report on the message, to be heard and discussed in executive session.

On motion, the House adjourned until 1:30 o'clock p. m., April 30, 1924.

GENERAL SESSION AND MEMORIAL EXERCISES.

The general session convened in the Travis Park Methodist Church, eight o'clock p. m., with Dr. H. W. Cummings of Hearne, Chairman of the Committee on Memorial Exercises, in the chair.

Chairman Cummings: Dr. Arthur J. Moore of San Antonio, will deliver the invocation. The audience will please rise.

INVOCATION.

Our gracious Heavenly Father, we are conscious tonight that Thou art the Lord of life and of death. We stand in Thy presence with bowed heads and with humble hearts, and invoke Thy blessings upon this service.

We are thinking tonight of those brave men, those servants of Thine who have gone out of our presence during the past year; we are remembering their stainless lives, their years of sacrificial service. We feel that we are better tonight because they have lived among us, and we honor their memory. We pledge Thee to be more faithful in the service of humanity and of God, as a result of the things they have left behind. We ask for a very special blessing upon all who are near and dear

to these who have gone ahead of us into the better world. May they be conscious tonight of Thine unfailing care; may they realize that underneath them are the everlasting arms. Bless the memory of these noble men and bless this service tonight, these who shall take part in the service; these our friends who have come from the ends of the State. May their stay in our city be one of profit and of pleasure, and may we all go forth to serve Thee more efficiently as the result of this service. We ask for Christ's sake. Amen.

Chairman Cummings: The next will be a quartet, Mrs. Trueder, Mrs. Henry Flannery, Mr. O. W. Stapleton, and Mr. L. B. Stoner.

Chairman Cummings: According to the official list in the hands of the Secretary of the State Medical Association, forty-five members of this organization and thirty-six physicians who were nonmembers, died in the State during the past year. There are, possibly, other names that the Secretary has failed to receive, and I am asking anyone who knows of a physician, whether a member of this organization or not, just so he was an honorable physician, to send the name to the State Secretary, so that it may be published in the JOURNAL, along with the other names of our dead.

Dr. Dorbandt, the local member of this committee, will read the list of deceased members.

Dr. Dorbandt: The names of members will be read first.

DECEASED MEMBERS, 1923-1924.

Abney, Dr. Olin, Waskom.
Alexander, Dr. C. M., Coleman.
Bailiff, Dr. H. C., Beaumont.
Black, Dr. Hardy C., Waco.
Bettis, Dr. E. J., Cisco.
Bradbrook, Dr. Jas. A., Asherton.
Brewer, Dr. C. P., Fort Worth.
Carroll, Dr. T. W., Clarendon.
Cearnall, Dr. A. E., Indian Creek.
Cravens, Dr. J. A., Scurry.
Combs, Dr. R. L., Cooper.
Cunningham, Dr. Wm. W., Beaumont.
Dashiell, Dr. W. R., Mission.
Davis, Dr. T. P., Terrell.
Dial, Dr. H. C., Dallas.
Dial, Dr. J. J., Sulphur Springs.
Dodson, Dr. J. E., Sr., Vernon.
Florence, Dr. J. B., Leesburg.
Hewlett, Dr. L. L., Lockhart.
Hill, Dr. Homer, Austin.
Holcomb, Dr. Irl, Fort Worth.
Ivy, Dr. H. T., Hillsboro.
Jones, Dr. Richard G., El Paso.
Keplinger, Dr. Leonard, Waxahachie.
Leap, Dr. Harry J., San Antonio.
Lee, Dr. George H., Galveston.
Leftwich, Dr. T. F., Winfield.
McFerran, Dr. R. W., Childress.
Myers, Dr. Wm., Seguin.
Newman, Dr. A. M., Canadian.
Penman, Dr. C. A., Beaumont.
Pickett, Dr. Jas., Plainview.
Rucker, Dr. W. E., McKinney.
Sandefer, Dr. G. H., Abilene.
Sanderson, Dr. Wm. S., San Saba.
Sellers, Dr. R. B., Fort Worth.
Shapard, Dr. R. R., Anson.
Smith, Dr. M. M., Dallas.
Smith, Dr. W. H., Heidenheimer.
Snyder, Dr. E. W., Brownwood.
Spiller, Dr. Chas., Willis.
Sykes, Dr. Geo. S., Galveston.
Vaughan, Dr. Walter B., Honey Grove.
Vermillion, Dr. J. W., Sinton.
Ward, Dr. E. D., Hillsboro.
Weaver, Dr. H. C., Rule.
Winters, Dr. Earle S., Dublin.

DECEASED NONMEMBERS, 1923-1924.

Barnes, Dr. H. D., Arlington.
Bell, Dr. W. A., Farmersville.
Black, Dr. T. R., Paris.
Bowen, Dr. J. K. F., Dallas.
Brian, Dr. M. W., Hillsboro.
Collins, Dr. J. A., Ranger.
Cunningham, Dr. John, Ravenna.
Davidson, Dr. J. K., Eagle Lake.
Eads, Dr. M. H., Sweeny.
Ferrell, Dr. J. Z., Dallas.
Grant, Dr. E. E., Cypress.
Harris, Dr. R. A., Grand Prairie.
Holmes, Dr. W. C., Trenton.
Holton, Dr. J. O., Prairie Hill.
Johnson, Dr. L. F., Beaumont.
Keaton, Dr. J. D., Dallas.
Kelsey, Dr. J. B., Deport.
LaBauve, Dr. R. E. L., Edna.
LeMaster, Dr. R. R., Goliad.
Lenoir, Dr. J. M., Blossom.
Luck, Dr. B. B., Breckenridge.
Matthews, Dr. H. L., Dawson.
McNatt, Dr. W. J., Alliance.
McKeown, Dr. Geo. W., Osceola.
Mitchell, Dr. Jos. E., Kosse.
Nowlin, Dr. J. F., Italy.
Oden, Dr. B. N., Deadwood.
Poindexter, Dr. J. K. P., Kosse.
Rogers, Dr. W. L., Houston.
Sellers, Dr. John G., Spring.
Smith, Dr. E. P., Cleburne.
Stewart, Dr. W. M., Terrell.
Swepston, Dr. E. A., Myrtle Springs.
Wheeler, Dr. W. J., Commerce.
Wilson, Dr. J. S., Ferris.

Dr. Dorbandt: My friends, it would be sacrilege on my part and ingratitude on the part of Bexar County Medical Society, if we should on this occasion fail to mention our own beloved Dr. Harry L. Leap. Dr. Leap died on Saturday of last week, and was buried Sunday, the only member of our society of more than two hundred, to die in the last two years. Mrs. Leap rendered me invaluable service as the local member of this committee, in arranging the musical program for this service. In fact, Mrs. Leap arranged that portion of the program by herself. In spite of her bereavement, and her grief, she is here, now, doing her part; she is at the organ tonight.

Dr. Leap was more than a success in his profession; he was an active worker in all of our civic clubs, in the Rotary Club, and was twice President of our Physics Society. He was an active worker in the Masonic Lodge—in fact, was Master in one of our local lodges at the time of his death. Because he did his work thoroughly and efficiently, of course more work was given him to do. It can be truly said of him, that he gave his life to the service of his clients and his friends, and to the civic and social enterprises of the city. In spite of all his interest in civic affairs, and in the upbuilding of San Antonio, the integrity and honor of his citizenship, his chief glory was in the orthopedic clinic he maintained for the crippled and poor children, at the Santa Rosa Hospital, where he devoted a great deal of his professional time. Many poor little tots have been restored through his efforts, not only to lives of comfort, but to lives of usefulness in the community in which they live.

Dr. Leap did not sit in the seat of the scorner, nor hurl the cynic's ban; he lived in the house by the side of the road and was a friend to man. He was a Noble of the Mystic Shrine, and when the time came for the black camel, which leads that myste-

rious caravan, the symbol of death, to kneel at his gate, his soul was just wafted away like the sweet melody from a tuneful string. For Mrs. Leap and the children let us pray that the pomegranates of plenty grow abundantly around about them; that the archangel of love sprinkle their door facings with the Divine antiseptic, and like Poe's raven, perched above the door, may his princely character, his loyalty, his love and devotion to his family, remain fresh in their memories forevermore.

Chairman Cummings: This committee feels under special obligation to Mrs. Leap for being with us this evening, and helping us in the rendition of this program.

The Chairman then delivered the Memorial Address which will be found elsewhere in this number of the JOURNAL, beginning on page 74.

The Memorial Address was followed by a vocal solo, "Some Sweet Day," by Miss Rubie Perryman Hardin of San Antonio, and a violin solo, "Elegie," by Mrs. T. M. Wheat of San Antonio.

Chairman Cummings: Immediately after the benediction, Mrs. Harry Leap will play the postlude.

Mr. O. W. Stapleton:

BENEDICTION.

Now may the grace, mercy and peace of the love of God, and the communion of the Holy Spirit, abide with you all always. Amen.

There being no further business, the session stood adjourned.

Second Day, Wednesday, April 30, 1924

MINUTES OF THE HOUSE OF DELEGATES.

The House of Delegates met pursuant to adjournment, at 1:30 o'clock p. m., with President Dr. Scott in the chair. The Secretary called the roll and announced that 78 members of the House were present, constituting a quorum.

The President: The next order of business is the report of the Committee on Cancer,

Dr. I. L. McGlasson of San Antonio, then read the report, as follows:

REPORT OF THE COMMITTEE ON CANCER.

It was our purpose to furnish statistics, as was done in our last report, so that our report might serve as an authentic source of information, but there are no statistics available that would add greatly to those furnished last year. Statistics are being prepared that will probably bring the cancer situation up to date. As soon as these are available, I will ask the indulgence of our efficient Secretary in having them published as a supplementary report.

The report of 1921 showed twenty cities with a mortality rate exceeding 100 per 100,000 population. This must be looked upon as alarming, and it has not decreased. It should be remembered that between 1915 and 1921, there was a jump from 87.9 to 101.5. If this marked increase is not shown in the newer statistics, our efforts have been well worth while. The meager reports available from institutions doing a large amount of cancer work, would seem to indicate that the cancer rate is being lowered, and it is confidently believed that the rate of 101, if increased at all, will be on a much smaller percentage basis.

It should be understood that cancer control is one of our newer undertakings, and that the results of our efforts today will really not be known until some years hence. For instance, if a potentially cancerous lesion is treated and cured, there will be one less cancer patient. No report of this work will be available, but there will be one less cancer death a few years later. Those of us who are depressed by not seeing actual, immediate results, should not forget that the cure of a precancerous lesion is a patient saved, notwithstanding the fact that its effect on statistics is not immediately shown. The importance of our work is just as great. Enthusiastic workers are needed just as badly.

CIVIC ORGANIZATIONS.

Civic organizations have been of inestimable value and are doing more and more each year for this work. Thanks should be expressed to the Rotary, the Lions, the Kiwanis and Canopus Clubs, for their hearty co-operation. They have all cordially given over their programs to us when asked to do so. Many times they have voluntarily tendered them to us. We are convinced that if there is a club in the State that has not held a cancer meeting, it is because the medical members of the organization have not asked for it. I want to say here that these clubs are all made up of thinking men. They are easy to talk to, are sympathetic listeners, and become real evangelists in this work. So please, when you go home, see that this is done.

Your Chairman has been the speaker at engineers' clubs, aid societies, ladies' auxiliary clubs, Bible classes, churches, etc., as have many officers and members of our State Association, and I want to urge all members of the Association, regardless of official connection, to prepare themselves so that they can be available for service in this connection. We are explaining in our lectures, that the cancer problem is a one man problem, and this is no less true from the physician's side. It is a one man problem, but the problem of every member of this great Association. On more than one occasion speakers have been asked for in vain.

It would seem that the irregular practitioners, magnetic healers, Abramites and other cults complained of in our last report, are not as harmful as formerly; still, they are a great menace and the fight against them must not be curtailed in any manner. And, as we said in our last report, the Cancer Committee is inseparably connected with the educational and publicity committees in this attack, because these people can do more harm here than in any other single field.

The American Society for the Control of Cancer changed the "Cancer Week" to a "Cancer Month" this year, but I am glad to say that our work continued pretty well throughout the year. During this month one member of the Cancer Committee, Dr. Singleton of Galveston, addressed a meeting in which there were some 800 in attendance. We want to urge that the new year's work be on the same basis, and that every available opportunity to reach any considerable number of people be used. During this meeting of the State Medical Association, your incoming President, Dr. Bledsoe, is addressing a committee of women's clubs, so the good work should be kept up during the entire year.

Some of the difficulties of last year are still with us. Some of the presidents and secretaries of county societies are a bit difficult to get enthused over this work. It is believed, however, that the forthcoming publicity campaign will materially aid us in this work.

All in all, we are safe in saying that the work of the Cancer Committee has been materially successful during the year, and while there are many things that we could have done to advantage, a wholehearted effort has been made. It is safe to say that the medical profession is making progress in the study of the cancer problem.

Your committee recognized the wonderful work of the American Medical Association on the cancer problem; the high standards of the American Society for the Control of Cancer, and its co-operation, are very much worth while, yet there are obviously different situations in each state. It is, therefore,

recommended that national plans, both of the American Medical Association and of the American Society for Cancer Control, be used as far as applicable in our State, and that such other procedures as are locally indicated be also used.

The clinics recommended in last year's reports have not been held in as many points as we believe are available, and it is very urgently recommended that clinics be systematized and held in every center where facilities are available. The two teaching institutions, the medical departments of the State and Baylor Universities, have agreed to hold cancer clinics during their clinic weeks, and this will be of marked benefit. It is to be hoped that every medical organization in the State attempts some sort of clinical instruction on cancer.

We have no special recommendations to make this year, except as suggested above. While we feel a certain degree of optimism, it does not mean that the situation has been adequately dealt with; nor will the situation be adequately dealt with until after years of earnest and conscientious effort on the part of every physician in the State.

We want to give our earnest and sincere thanks to the retiring President, for his continued support and active work in the cancer program. Appreciation is heartily expressed to the incoming President, Dr. M. F. Bledsoe, who is in thorough sympathy with the work, and has been an invaluable aid and always responsive to any demands made on him. The Board of Councilors have never refused any request made of them, and the thanks of the committee are hereby extended to them. It would seem superfluous to tell you of our efficient Secretary, Holman Taylor; the chairman of this committee is convinced that he is the greatest State Medical Association Secretary in the United States. He has not only done everything asked of him, but has voluntarily done things of the greatest value, that the committee did not even think of. And his knowledge of the workings of the State Medical Association constitutes one of our greatest assets.

Respectfully submitted,

I. L. McGLASSON, Chairman.

Referred to the Reference Committee on Scientific Work.

The Secretary then read the following telegram from Dr. S. Ross Jones, of Waco, addressed to the House of Delegates:

"I take this method of expressing regret that I cannot be present as delegate from McLennan County Medical Society, on account of the death of my father, which occurred this morning."

On motion, the Secretary was directed to express the sympathy of the Association to Dr. Jones, in a communication at the proper time.

The President: Are there any memorials and resolutions?

Dr. J. W. Torbett, of Marlin, introduced a resolution in the interest of the establishment of a Section in Radiology and Physiotherapy, which was referred to the Reference Committee on Scientific Work.

Dr. M. F. Bledsoe of Port Arthur, introduced a resolution, commending Harry Brundidge, the St. Louis Star, and Collier's Weekly, for their efforts in exposing the fraudulent medical diploma business in this country, which was referred to the Reference Committee on Resolutions and Memorials.

The President: We will hear the reports of Reference Committees.

Dr. C. W. Goddard of Austin, presented the first report of the Reference Committee on Reports of Officers and Committees, as follows:

FIRST REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND COMMITTEES.

1. We recommend the adoption of the Secretary's report, with thanks for his efficient, faithful and valuable services to the Association.

2. We recommend the adoption of the report of the Board of Councilors, and the approval of the first method mentioned therein for increasing the revenues of the Association, i. e., by raising the annual dues; and we commend the councilors for their splendid report.

3. We recommend the adoption of the report of the Council on Legislation and Public Instruction, with thanks for its splendid services.

4. We recommend the adoption of the report of the Council on Medical Defense, and commend this committee for its efficient work.

5. We recommend the adoption of the report of the Committee on Transportation, and commend that committee for its efficient services.

6. We recommend the adoption of the report of the Committee on Compensation and Health Insurance, and commend this committee for its valuable services.

7. We recommend the adoption of the report of the Texas Member to the National Legislative Council, and applaud the splendid work done by him, and we recommend that suitable resolutions pertaining to this subject be submitted for adoption.

Respectfully submitted,

C. W. GODDARD, Chairman,
J. M. FRAZIER,
A. C. DELONG,
J. E. BOYD,
A. O. CRAGWELL.

Dr. Goddard: The committee has a special report pertaining to matters presented to this House in the report of the Board of Councilors, the report of the Council on Legislation and Public Instruction, and the message of our eminent President, in executive session yesterday. This report will be presented to the House when it goes into executive session, and ready to receive it.

On motion of Dr. A. P. Howard of Houston, seconded by Dr. A. E. Sweatland of Lufkin, the first report of the Reference Committee on Reports of Officers and Committees, was adopted.

Dr. Winfred Wilson, of Memphis, then read the first report of the Reference Committee on Resolutions and Memorials as follows:

FIRST REPORT OF THE REFERENCE COMMITTEE ON RESOLUTIONS AND MEMORIALS

There has been referred to us for consideration the following resolution:

RESOLUTIONS ENDORSING CITIZENS' MILITARY TRAINING CAMPS.

"Whereas, The Citizens' Military Training Camps, without obligation to the student for further military service, offers a fundamental military training to boys at an age when they are commercially nonproductive, and at the same time performs the inestimable service in the training of growing manhood in civic duties and responsibilities, and affords physical training, equally, to all students to a degree not ordinarily taught in our public school systems, thereby improving the character and physique of our future citizens; and

"Whereas, We realize the great good to be accomplished at these camps; therefore, be it

"Resolved, That the Texas State Medical Association, endorse the Citizens' Military Training Camps and tender our services gratuitously to the

Officers in Charge, Citizens' Military Training Camp Affairs, Eighth Corps Area, Fort Sam Houston, Texas, or any other camp, for the purpose of making all necessary physical examinations and administering smallpox vaccination and typhoid prophylaxis to applicants brought or sent to us, if the Government or applicant will furnish the smallpox vaccine and the triple immunizing doses of typhoid and para-typhoid vaccine; and be it further

"*Resolved,* That a copy of this resolution be sent to the Officer in Charge, Citizens' Military Training Camp Affairs, Headquarters Eighth Corps Area, Fort Sam Houston, Texas, and that copies be furnished the newspapers of the State of Texas."

We recommend that the resolution be adopted.

Also the following Resolution:

RESOLUTIONS COMMENDING DR. R. E. HOUSE.

"*Whereas,* One of our respected members, Dr. R. E. House, of Ferris, Texas, has been earnestly and zealously endeavoring for several years past to perfect an idea connected with medicine and criminology, in an ethical and scientific manner; and

"*Whereas,* His efforts have long been attended by unfortunate and very disagreeable publicity which has placed him in a false light before many to whom he would appeal for support and assistance; therefore, be it

"*Resolved,* That this House of Delegates assure the medical profession and others concerned, of the good intentions of Dr. House, in his desire to place the so-called "Truth Serum" on a strictly scientific and ethical basis, and make it available to the fullest extent possible, in the field of criminology."

We realize the inherent delicacy of this situation, and also the very evident integrity of Dr. House, who in his enthusiasm has probably overstepped some of the obsolete standards of medical reticence and has brought upon himself unjust criticism in his unsought publicity, in the face of our expressed intent of educating the public as to the possibilities of our service to them; therefore, we recommend the adoption of this resolution.

We respectfully submit the following resolution and recommend its adoption:

RESOLUTION OF THANKS.

Resolved, That it is the sense of this Association that a vote of thanks be and it is hereby extended to the Bexar County Medical Society and to the Woman's Auxiliary of the Bexar County Medical Society, for the very efficient arrangements and delightful entertainment provided for the Fifty-eighth Annual Session of the State Medical Association, and that a vote of thanks be extended to the City of San Antonio, through the mayor, the Hon. John W. Tobin; to the Travis Park Methodist Church, through Rev. Moore; to those who assisted in our Memorial Exercises; to the press for the reports of our session, and to the hotels of the city for their courtesies, and that this resolution be spread upon our minutes and copies furnished to the various newspapers of this city.

Respectfully submitted,

C. R. HANNAH, Chairman,
C. E. DURHAM,
E. W. MCCAMISH,
W. WILSON,
G. D. LANE.

Dr. F. R. Winn of Paris moved the adoption of the report, which motion was seconded by Dr. J. W. Torbett, of Marlin.

Dr. J. W. Burns of Cuero: I move to amend the motion to show merely that we believe in the integrity of Dr. House, and that he is honestly and fairly trying to do his professional duty. We have no knowledge of the intimate facts connected with this case.

The President: The Chair believes the resolution is improper. It pertains to medical ethics, and our by-laws provide that all matters pertaining to ethics be referred to the Board of Councilors.

Dr. Winn: The committee reports about as Dr. Burns suggested.

The President: The report will be read.

Dr. Winn: I accept the amendment of Dr. Burns.

Dr. W. P. Coyle of Orange: There are no charges against Dr. House; his integrity has not been brought into question before this House; if he were guilty of something this would be no place to bring it up. I move that all reference to Dr. House be stricken from the record.

The motion was seconded.

The President: The motion is out of order.

Dr. M. L. Graves of Galveston: This committee acted properly in reporting on that resolution. It had been referred to the committee by this House. There is no occasion for striking it from the record. If this is, as the President states, and it appears to me to be true, a matter of medical ethics, then it occurs to me that the proper procedure would be to refer this portion of the report to the Board of Councilors for action. I, therefore, make the substitute motion that the matter regarding Dr. House, whose integrity and good intentions I fully believe in, be referred to the Board of Councilors for action.

Dr. A. E. Sweatland of Lufkin: I second that motion.

The motion was put and carried, and that portion of the report under discussion was referred to the Board of Councilors.

Dr. J. W. Burns of Cuero moved the adoption of the report as amended, which motion was seconded by Dr. C. W. Goddard of Austin.

The motion was put and carried, and the report adopted.

The President: Has the Reference Committee on Finance anything to report at this time?

Dr. W. P. Coyle of Orange, then read the first report of the Reference Committee on Finance, as follows:

FIRST REPORT OF THE REFERENCE COMMITTEE ON FINANCE.

Inasmuch as the reports of the Trustees and Treasurer, and the books have been audited and approved by a competent firm of Public Accountants, and inasmuch as this report has already been accepted and published, we feel that these reports are acceptable to the Association, and that we do not have sufficient evidence to form an independent opinion. We therefore recommend the acceptance and approval of the reports as audited.

Respectfully submitted,

W. P. COYLE, Chairman,
C. C. CODY,
J. C. JARRETT,
W. P. MCCALL,
D. W. BLACK.

On motion of Dr. A. E. Sweatland of Lufkin, seconded by Dr. W. E. Connor of Cumby, the first report of the Reference Committee on Finance was adopted.

The President: The Reference Committee on Amendments to Constitution and By-Laws.

FIRST REPORT OF REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.

We beg to submit the following:

AMENDING THE BY-LAWS PERTAINING TO COUNCIL ON MEDICAL DEFENSE.

1. We recommend the adoption of the Resolution referring to the Council of Medical Defense, to amend Article VI, Section 4, of the By-Laws, by changing the word "three" in the second line thereof to read "four," and Article VI, Section 5, by changing the word "three" in the seventh line to read "four," and by adding to the eighth line thereof the words "three" and "four," and deleting the word "and" between the words "two" and "three."

2. The Supplementary report of the Committee on Amendments to the Constitution and By-Laws carries the following proposed amendments:

"Amend Chapter XI by substituting for Section 1, the following: 'Sec. 1—An assessment of $15.00 per capita on the membership of component county societies is hereby made the annual dues of the Association. Of this amount $2.00 shall be the subscription fee to the TEXAS STATE JOURNAL OF MEDICINE, $1.00 shall go to the Medical Defense Fund, and $10.00 to the Publicity and Educational Fund.'

"Amend Chapter XI by adding the following section:

" 'Section 3. A fund to be known as the Publicity and Educational Fund is hereby established. This fund shall consist of $10.00 per capita, which amount shall be set aside by the Board of Trustees for the use of the Council on Public Health and Legislation. It shall be expended by orders of the Council on Legislation and Public Instruction, and upon vouchers signed by the Secretary of the Association and countersigned by the Chairman of said Council. It shall be used for any purpose falling within the duties of the said Council on Public Health and Legislation and shall be used for no other purpose, except upon unanimous agreement of the said Council, unanimously approved by the Board of Trustees.

"Amend the present Section 3 of Chapter XI by changing its designation to 'Section 4.' "

While your committee recognizes the urgent necessity of and the immediate demand for increased funds to carry on the proposed educational campaign, and while as individuals we heartily endorse the resolution, we nevertheless feel that such a radical increase in dues should not be made without the sanction of constituent county societies. We, therefore, recommend that each component county society send its delegates to the next Annual Session instructed on this subject.

PENDING AMENDMENT TO CONSTITUTION.

3. We recommend the adoption of the proposed amendment to Article XI of the Constitution by adding the following to Section 1, thereof: "Provided further, that a total and complete revision of the Constitution and By-Laws may be accomplished at any regular session, notice having been given of such intention, in the House of Delegates, in a meeting during the preceding Annual Session of the Association.

Respectfully submitted,

JOHN W. BURNS, Chairman,
E. L. GOAR,
D. L. BETTISON,
D. LEON SANDERS.

The Secretary: I move that the report be adopted, with the exception of that part which refers to raising the dues, that part to be considered in executive session, in connection with the message of the President.

The motion was seconded by Dr. J. W. Burns of Cuero, put and carried, and the report declared adopted, with the exception indicated.

The President: Reference Committee on Scientific Work.

The first report of Reference Committee on Scientific Work was read by Dr. A. H. Flickwir, Chairman, as follows:

FIRST REPORT OF THE REFERENCE COMMITTEE ON SCIENTIFIC WORK.

We recommend that the report of the Committee on Scientific Work be adopted in toto, and we would particularly stress the importance and wide scope of the work in which this committee could properly function, and recommend that it be made a Council.

With reference to the report of the Committee on Health Problems in Education, we commend the efforts of the Chairman, Dr. J. M. Frazier, for the extensive and comprehensive work which he has done along these lines. We recommend that this report be approved.

We also recommend that the Report of the Committee on Scientific Exhibits be received and adopted, and especially endorse the recommendation of the Committee that all scientific exhibits should operate through that committee. We would especially commend the efforts of Dr. W. H. Moursund, Dean of the Medical Department of Baylor University, for the aid he has given this committee, in providing a splendid exhibit.

We wish also to commend the officers of the Second Medical Regiment and the authorities of the American Legion Hospital at Kerrville, for the instructive exhibits furnished by them.

Respectfully submitted,

A. H. FLICKWIR, Chairman,
J. H. GAMBRELL,
J. G. MCCALL,
F. R. WINN.

On motion of Dr. A. E. Sweatland of Lufkin, seconded by Dr. H. R. Giles of Corpus Christi, the first report of the Reference Committee on Scientific Work was adopted.

On motion, the House reverted to "Resolutions and Memorials," in the order of business, and the Secretary submitted resolutions looking to the suppression of the illegal and illicit opium traffic, which was done upon the request of the White Cross, a national anti-narcotic society.

The resolutions were referred to the Reference Committee on Memorials and Resolutions.

Upon motion of Dr. J. W. Burns of Cuero, seconded by Dr. A. A. Ross of Lockhart, the House adjourned, to meet at 9:00 o'clock a. m., May 1, 1924.

GENERAL SESSION.

President Dr. Scott called the General Session to order at 3:30 o'clock p. m., in the Travis Park Methodist Church.

The President: This program has been prepared for a special purpose, and I think we are to be congratulated upon the fact that we have with us speakers who are well acquainted with their subjects. It is my very great pleasure to introduce to you the Honorable Wayne Davis, of San Antonio.

Mr. Davis then presented his address, "The Practice of Medicine a Lay Problem," which will be found elsewhere in this number of the JOURNAL.

The President: The next speaker on the program is a member of the Council on Legislation and Public Instruction of the State Medical Association. He

is one who has done his whole duty ever since he has been a member of that Council; he is one of our workers upon whom we have been able to place our finger when it came to attending to the work of this Association. I think, perhaps, that it would be entirely appropriate for me to call attention at this time to the fact that he saw the necessity of public health education not less than twenty years ago, and really ran the risk of bringing upon himself censure for carrying out his convictions in that respect. I do not know a man in Texas who has brought upon himself as much censure for doing his duty. I take pleasure in introducing to you Dr. C. M. Rosser, of Dallas. (Continued Applause.)

Dr. Rosser then delivered his address, "The Practice of Medicine a Matter of Mutual Concern to the Laity and the Medical Profession," which will be found elsewhere in this number of the JOURNAL.

The President: I have just observed in the audience a gentleman whom I wish we had time to hear. We will not have time to hear him, but I want to tell you who he is. Judge Melson, will you please stand a moment, where you are? I want these people to know who you are. (Applause.) There stands a friend of humanity, a friend to the medical profession, and one of those worthy gentlemen of the Legislature who fought such a difficult fight, and secured the amendments to the Medical Practice Act which made it effective. (Applause.)

The next speaker is Dr. W. M. Bourn of San Antonio.

ADDRESS OF DR. W. M. BOURN.

Dr. Bourn then delivered an address on "The Public Health Importance of Dentistry," which will be found elsewhere in this JOURNAL.

The President: There are two or three other matters that must be attended to, and we are now encroaching upon time that belongs to another part of the program. I shall, therefore, ask whether you wish to take any action regarding the remarks made by Dr. Rosser.

PERTAINING TO ENFORCEMENT OF LAWS, AND PRESCRIBING NARCOTICS AND WHISKEY.

Dr. J. A. Wall of San Antonio: I move that it is the sentiment of the organization that we uphold the enforcement of all laws, and that we adhere strictly to the requirements of the law governing the prescribing of both narcotics and whiskey.

The President: You have heard the motion made.

Dr. C. W. Goddard of Austin: I second the motion.

The motion was unanimously carried.

Dr. M. L. Graves of Galveston: The hour is late. I believe a General Session is competent to change the program as it sees fit. It seems to me it would be desirable that our whole Association have the opportunity of hearing these distinguished gentlemen from other States. I move that we adjourn this meeting after the next speaker is heard, and ask Dr. Haggard and Dr. Roberts to give us their addresses at a General Session tomorrow afternoon at 2:30 instead of 3:30.

The President: Dr. Roberts will not be here tomorrow afternoon; it will be agreeable with Dr. Haggard.

Dr. Graves: I move, then, that we hear Dr. Haggard's address, and that of Dr. Whisenant, tomorrow afternoon at the General Session.

The motion was duly seconded, put and carried.

ADDRESS OF DR. STEWART R. ROBERTS.

Dr. Stewart R. Roberts of Atlanta, Georgia, then delivered an address on "The Service of Medicine," which will be found elsewhere in this number of the JOURNAL.

At 6:00 o'clock, p. m., adjournment was taken.

Third Day, Thursday, May 1, 1924

MINUTES OF THE HOUSE OF DELEGATES.

The House of Delegates was called to order at 9:30 o'clock a. m., with President Dr. Scott in the chair.

The Secretary called the roll and announced that 109 members were present, constituting a quorum.

Dr. Jno. T. Moore of Houston, introduced resolutions pertaining to the death of Capt. J. C. Ralston, which were referred to the Reference Committee on Resolutions and Memorials.

The Secretary: The Reference Committee on Credentials has asked me to report the roll that was called this morning, and calls attention to the fact that the committee has seated several delegates in the place of delegates who were present yesterday, but who have returned home. Permit me to explain that the House decided some time ago that is was proper to seat an alternate in the place of a delegate who had been seated, in the instance the principal or the alternate already seated, had left town, but otherwise not.

Upon motion, the roll as just called by the Secretary and as reported by the Reference Committee on Credentials, was adopted as constituting the House of Delegates.

Dr. Winfred Wilson of Memphis, then presented the Second Report of the Reference Committee on Resolutions and Memorials, as follows:

SECOND REPORT, REFERENCE COMMITTEE ON RESOLUTIONS AND MEMORIALS.

We recommend the adoption of the following resolution, presented by Dr. John T. Moore of Houston, and referred to this committee:

RESOLUTIONS ON DEATH OF CAPTAIN J. C RALSTON.

Whereas, the very recent death of Captain J. C. Ralston has affected the State Medical Association peculiarly, in that his only two sons were physicians and members of this organization, practicing medicine with credit to themselves and honor to their father and their profession, and three of his daughters have linked their lives with the medical profession by marrying physicians, and during the years that he served in the State Legislature he was ever the staunch friend of organized medicine and fought valiantly for its ideals and standards, contributing largely to the enactment of the first board of health law of this State; therefore, be it

Resolved, that the House of Delegates of the State Medical Association express to the bereaved ones the sympathy of the medical profession of Texas, and a feeling of keen loss in his passing, taking comfort with his family in the thought that he lived to a ripe old age, loved by family and friends and in the enjoyment of the confidence and esteem of his fellow citizens; and be it further

Resolved, that copies of these resolutions be furnished the surviving members of his family, and that the resolutions be printed in the TEXAS STATE JOURNAL OF MEDICINE.

We also recommend the adoption of the following resolutions, submitted by Dr. M. F. Bledsoe of Port Arthur:

RESOLUTION PERTAINING TO DIPLOMA MILL SCANDAL.

Whereas, the *St. Louis Star* and its talented reporter, Mr. Harry Brundige, have succeeded in uncovering one of the nests from which have been

hatched, through many years, a foul brood of medical diplomas, certificates and licenses; and

Whereas, Collier's Weekly has in recent numbers given still wider publicity to the serious situation thus disclosed; therefore, be it

Resolved, that this House of Delegates go on record as highly appreciative of the services rendered in this case by Mr. Brundige, the *St. Louis Star* and *Collier's Weekly;* and be it

Resolved, further, that this action be conveyed officially to those mentioned, and that the resolutions be spread upon the minutes of this body and published in the JOURNAL with the proceedings of this session.

RESOLUTIONS PERTAINING TO FEDERAL NARCOTIC TAX.

We also recommend the adoption of the following resolution, introduced by Dr. M. F. Bledsoe of Port Arthur, Texas member of the National Legislative Council:

Whereas, the medical profession gave its hearty endorsement to a Federal law intended to curtail the abuse of narcotics and confine their use to the legitimate relief of pain, agreeing to a nominal tax of one dollar per annum, and to a reasonable amount of red tape necessary for the operation of the law, in order that the said law might be made effective; and

Whereas, the medical profession likewise agreed to the increase of this tax during the war, as an additional revenue producer for the conduct of the war; and

Whereas, at the conclusion of the war, when there was no further necessity for extraordinary measures for the raising of money by taxation, when other extraordinary war taxes are being relieved by Congress, the aforesaid additional taxation on the medical profession has been continued, in effect a tax on the relief of suffering and an imposition on those who would relieve suffering; therefore, be it

Resolved, that the State Medical Association of Texas, in solemn session assembled, most earnestly protests the continuation of the additional taxation here referred to, and in all fairness calls upon Congress, and the Bureau directly concerned in the formulation of regulations, to so reduce the red tape involved as to render the operation of the law possible without such great inconvenience; and be it further

Resolved, that the members of Congress from Texas be and they are hereby requested, to use their utmost endeavors to carry out the purport of these resolutions.

The following resolution, also introduced by Dr. Bledsoe, is recommended for adoption:

RESOLUTIONS PERTAINING TO FEDERAL INCOME TAX REGULATIONS.

Whereas, the present law governing the assessment of income taxes, provides that physicians, in common with other business and professional men, may deduct "all ordinary and necessary expenses paid and incurred during the taxable year in carrying out any trade or business, including a reasonable allowance for salaries or other compensation for personal services actually rendered; traveling expenses (including the entire amount expended for meals and lodging) while away from home in the pursuit of trade or business;" and

Whereas, the Commissioner of Internal Revenues has ruled that a physician who is away from home attending a meeting of a medical society or pursuing postgraduate study, is not away from home in the pursuit of his profession and for that reason that the expenses incident to such travel and study are not necessary expenses in his practice, and consequently not deductible as contemplated by law; and

Whereas, this ruling appears so manifestly at variance with the plain provisions of the law and so unjust to the medical profession, in comparison with other professions and businesses, as to call for protest and argument; therefore, be it

Resolved, that the State Medical Association, in regular session assembled, calls upon the Commissioner of Internal Revenues, through whatever channels may seem best, to revise this ruling so as to apply this law more equitably as between the medical and other professions and business; and be it further

Resolved, that in the instance such revision may not be had upon appeal, Congress be urged, through our Representatives and Senators, to so revise the law as to make such discrimination impossible.

The following resolution, introduced at the instance of the "White Cross," an international anti-narcotic society, with principal offices in Seattle, Washington, would appear to be worth while, and we recommend their adoption:

RESOLUTION PERTAINING TO NARCOTIC ADDICTIONS.

Whereas, we view in the growing addiction to narcotic drugs a deadly menace to individuals and nations, an insidious rapidly spreading poisoning of the human race which can be overcome only by cooperation of all nations,

Therefore we, the State Medical Association of Texas, in convention assembled, heartily approve the noble work of the White Cross, the International Anti-Narcotic Society, in its efforts to stamp out all illicit growth, sale and use of narcotic drugs.

We further approve of the petitions circulated by the White Cross to bring about international cooperation at the International Opium Conference in November, 1924, in adopting measures adequate for the total extirpation of plants from which narcotics originate, except as found necessary for medicine and science in the judgment of the best medical opinion in the world.

In the adoption of these resolutions, the State Medical Association is reiterating the stand against the illicit traffic and use of narcotics, taken after due investigation by an opium committee of the American Medical Association ten years ago.

Respectfully submitted,

C. R. HANNAH, Chairman;
C. E. DURHAM,
E. W. MCCAMISH,
W. WILSON,
G. D. LANE.

Upon motion of Dr. Vineyard, seconded by Dr. Goddard, the second report of the Reference Committee on Resolutions and Memorials was adopted.

The President: The Reference Committee on Scientific Work will report.

SECOND REPORT OF REFERENCE COMMITTEE ON SCIENTIFIC WORK.

Dr. A. H. Flickwir then presented the report of the committee, as follows:

We recommend that the request of the Radiology and Physiotherapy Society, as embodied in the following resolution, for a separate section in the State Medical Association be granted.

AMENDMENT TO BY-LAWS, CREATING SECTION ON RADIOLOGY AND PHYSIOTHERAPY.

Whereas, the Sciences of Radiology and Physiotherapy are being used extensively by surgeons and internists, and their importance is such that the American Medical Association has given them a special place on the scientific program of that great organization; and

Whereas, we look upon the American Medical Association as a worthy guide; therefore, be it

Resolved, that Chapter X, Sec. 1, of the By-Laws, be amended by adding thereto the following: "(6) Section on Radiology and Physiotherapy."

We recommend the adoption of the report of the Cancer Committee, and recommend that the educational work on cancer be continued. Furthermore, that the committee be thanked, through its chairman, Dr. I. L. McGlasson, for its painstaking work on this subject.

A. H. FLICKWIR, Chairman;
J. H. GAMBRELL,
J. G. McCALL,
F. R. WINN.

On motion of Dr. J. W. Torbett of Marlin, seconded by Dr. J. W. Caton of Eastland, the report was adopted and the amendment to Chapter X of the By-Laws declared adopted.

The Secretary: I move you, sir, that we go into executive session, for the purpose of hearing the report of the Reference Committee on Reports of Officers and Committees, and that all be excluded from the room except members of the Association and invited guests.

The motion was seconded by Dr. A. A. Ross of Lockhart, was put and carried, and the House went into executive session for the consideration of the special report of the Reference Committee on Reports of Officers and Committees.

* * * * *

The President: The executive session is concluded. The House will now come to order, and the Secretary will report, in accordance with orders of the executive session.

The Secretary: I am directed by the executive session to present the following report of the Reference Committee on Reports of Officers and Committees:

SPECIAL REPORT (SECOND) OF REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND COMMITTEES.

We beg to commend the able address of our esteemed President, to the House of Delegates, in executive session, and make the following special recommendations upon the subject-matter contained in said address, the Report of the Board of Councilors, and the Report of the Council on Legislation and Public Instruction.

These reports and the address emphasize the supreme importance and urgent necessity of at once promoting the educational campaign, as recommended.

We deem it of the greatest importance that the Association at once provide funds to carry on this educational campaign; therefore, we recommend that the Board of Trustees be authorized to lend to the Council on Legislation and Public Instruction the sum of Twenty Thousand ($20,000) Dollars; five thousand ($5,000) dollars out of the Medical Defense Fund and fifteen thousand ($15,000) dollars out of the general fund. Also to lend said Council an additional sum of ten thousand ($10,000) dollars out of the general fund, if it is found necessary to do so within one year.

We further recommend that the Association provide for the payment of these loans with 6 per cent. interest, out of dues collected from its members; and that the annual dues be temporarily increased to fifteen ($15.00) dollars.

We further recommend that should this report be favorably considered by the House of Delegates, that the Secretary be requested to make full and complete report of its objects and purposes to the members of the Association.

Inasmuch as the President's message, above mentioned, was referred to this committee and considered by it in formulating its report, we recommend that said address be adopted by the House of Delegates, with the committee report.

Respectfully submitted,
C. W. GODDARD, Chairman;
J. M. FRAZIER,
A. C. DELONG,
J. E. BOYD,
A. E. CRAGWELL.

The Secretary: This report, after extended discussion, was adopted, with the exception that the matter of securing the funds for the prosecution of the educational and publicity campaign be left with the Trustees and the Council on Legislation and Public Instruction.

I am also instructed to report that the House, in executive session, adopted the following amendment to the By-Laws, which is an amended version of the amendments submitted in the supplementary report of the Committee on Amendments to the Constitution and By-Laws:

AMENDMENT TO BY-LAWS INCREASING DUES.

"Amend Chapter XI, of the By-Laws, by substituting for Section 1, the following:

"'Section 1. An assessment of $15.00 per capita on the membership of component county societies is hereby made the annual dues of the Association. Of this amount, $2.00 shall be the subscription fee to the TEXAS STATE JOURNAL OF MEDICINE, and $1.00 shall go to the Medical Defense Fund.'"

Upon motion of Dr. J. H. Gambrell of El Paso, seconded by Dr. H. R. Giles of Corpus Christi, the transactions of the executive session, as reported by the Secretary, were formally adopted.

The Secretary then submitted for the Board of Councilors, a supplementary report, as follows:

SUPPLEMENTARY REPORT OF BOARD OF COUNCILORS.

We have disposed of routine business throughout the year in the usual manner. As stated in our preliminary report, our heaviest burden has been in relation to the collection of funds for the Educational Campaign. After carefully considering this matter, we have reached the following conclusion:

First. The proposed Educational Campaign is of vital interest to the people of Texas and to the medical profession, and should be continued.

Second. This work should be financed by a certain proportion of the annual dues. We therefore recommend that the annual dues be raised to an amount sufficient to best execute the interests of organized medicine.

We have had one instance where it appeared that it would be necessary to take up the charter of a county society for failure to observe the Constitution and By-Laws. The matter has, however, been adjusted in a way which we believe will be satisfactory.

We have had to consider one appeal from the ruling of a Councilor, and we believe we have adjusted the matter with justice and fairness to all concerned, and in the best interests of organized medicine.

We wish to again call your attention to what is distinctly the privilege as well as the duty of the profession in the matter of vital statistics. As you are aware the State of Texas is not included in the registration area of the United States. We consider this a serious reflection for which the medical profession cannot evade responsibility, and we are asking that you give the matter your immediate and serious attention. There are many reasons why we should

give this problem our best efforts. We will enumerate a few of them: First, it is our duty to our patients. It is often proclaimed that every child has the God given right to be well born. If this is so, it certainly has an equal right to have its birth properly recorded. It is only simple justice to our patients to see to it that contagious and infectious diseases be duly reported to the proper authorities. When death closes the scene for anyone of us, it is only simple justice to those of us who remain that it be definitely known whether or not the fatal illness could in any possible way cast an evil influence over anyone still living. Second, it is the law and should be obeyed. This reason alone is sufficient to warrant our hearty support. Third, our Governor is exceedingly anxious for Texas to be included in the vital statistics area, and he has been pledged the support of our Association in seeing that this work is accomplished. Therefore, in giving this matter our attention, we are not only keeping our promise but are rendering a conspicuous service to our patients and to our State.

W. BURTON THORNING, Chairman.

(Vice-President Dr. J. W. Torbett of Marlin, assumes the chair.)

Vice-President Torbett: The report is referred to the Committee on Reports of Officers and Committees.

Vice-President Torbett: The time has come for the election of officers for the ensuing year.

ELECTION OF OFFICERS.

The election of a President-Elect is now before you. I will appoint Drs. Ross, Killough, Gambrell and Connally as tellers.

(President Dr. Scott resumes the chair.)

Dr. Jno. T. Moore of Houston: The medical profession of Texas have honored me more than any desert of mine. I have always felt that there were so many members better qualified to serve you than I. For that reason I have sat in the House of Delegates year after year, and have had nothing to say in the selection of those to be honored; but the time has come when I feel so deeply that I am going to venture to present for your consideration a man of the profession, known not only in this State and in the United States, but throughout the world as the greatest living anatomist. (Applause.) This man is unfortunate when it comes to matters of publicity. He is so entirely retiring and modest that you have to approach him in order to meet him. I have known him since 1893, most intimately, having studied anatomy under him, having demonstrated anatomy in his department for two years, and having been associated with him in many capacities since that time.

I know, gentlemen, that it has become a sort of custom for some of our members to get together and start a campaign to elect certain members to office, even before the meeting has been convened, and I sometimes feel that there is a lack of spontaneity on our part in calling out our leaders, and a certain neglect of our more studious and accomplished members. I appreciate that others will be brought forth who have done work to merit any honor that this Association might confer upon them. I wish to place before you, with the tenderest love and the highest respect that a man in the profession can have for another man, Dr. William Keiller, of Galveston. (Applause.)

Dr. M. L. Graves of Galveston: Honor conferred upon a member of this Association by his election to the high office of President should be spontaneous. No man can be honored by machine methods. This House sometimes elects a member to the office in question who has been known for his active work in organized medicine, sometimes for distinct service in some branch of science, sometimes for devotion to the public welfare and to public health, but whatever the case, I believe it is always the ideal and aim of this House to elect the best man.

In rising to second the nomination made by Dr. Moore, I want to say to you that in nineteen years of association with him, as a member of the Faculty of the Medical Department of the University of Texas, I have known his incomings and his outgoings; I have had an opportunity to judge of his aims and of his purposes, of his character and of his accomplishments, of his devotion to the ideals of medicine and his devotion to public welfare and the high ideals of citizenship. All that Dr. Moore has said of him is true. I think, undoubtedly, he is the greatest living teacher of anatomy. (Applause.) I have visited many of the schools of this country and have come into intimate contact with their workings. I know of no one whose active work, research into anatomy, particularly neurological anatomy, and then the class-room, day by day, hard grind of teaching students, who compares with William Keiller. (Applause.) Not only that, but for utter self-effacement, for absolute honor and integrity, for utter devotion to the very best interests of medicine, for giving the young men committed to his care not only an accurate knowledge of scientific medicine, but inoculating in them high principles of honor and high ideals, he has no superior on this continent. In his relationship to the public health he has always, at the expense of his own personal health, been ready to respond to every call to appeal to the people for support and to give them information on tuberculosis, and cancer, and to do whatever he could to inform the public and to mould sentiment in behalf of scientific medicine. If now, fellow members of this House, you wish to honor a man who will honor you, here and elsewhere, who will serve you and the profession and the public with the same unstinted devotion of himself, you cannot among the members of our Association do better than to elect Dr. William Keiller. (Applause.)

Dr. A. B. Small of Dallas: There isn't a man within the sound of my voice whose sentiments have not been voiced by these gentlemen. From the Gulf of Mexico to the Lakes of Canada, I have had opportunities to say I consider it an honor to be a friend of William Keiller of Texas. And it is a fine omen, gentlemen, in organized medicine to hear what has been said here this morning, by such men as have said it, about such a man as it has been said about. No doubt we have all been in the chamber of twilight when the expected child was named in advance, and when the travail was over, and the child was of the opposite sex, how often we have heard them say, "Thank God, I wouldn't have it otherwise —just what I wanted." When that splendid man was elected at Fort Worth, perhaps the most popular man today in the State of Texas, three minutes afterwards I said, "Thank God, I wouldn't have it any other way." I also felt, and so did many of you here, that another man had been so nearly elected as to constitute an endorsement.

Some of us believe that he lost that one vote, and perhaps a half dozen others, because he had stood for a certain man for Governor of Texas—which fact gave us an audience that saved a situation which could not have been controlled in any other way. That question is settled. The man for whom I appeal is a clean man, who is in a position to prevent an unjust criticism upon the profession of medicine in Texas, by people who might be denominated fanatics, because his head is level on the subject. At one time in the history of France, in order

that the government might live, it became necessary that a citizens committee take charge of affairs. When that committee had been elected, one of them had to be denominated head consul. It required no juggling, no politics—there was an outstanding man to save France; and when he went out and won battles at the head of the Armies of France, did France recall him in order to discredit him?

From what we have heard this morning, gentlemen, we are facing a mountain. It may be the Alps. Some one must lead our forces across it. You have in your midst a man who can do it. If I call him the little Corsican, I mean no discredit. He is logically the man, he is psychologically the man. You know perfectly well who will be you leader in this crisis —not to fight the chiropractors, but to fight the enemies of medicine and the public health. I put in nomination Dr. C. M. Rosser of Dallas. (Applause.)

Dr. J. D. Osborn of Cleburne: But few of you have been in the great work of the medical profession, as I have, for forty odd years. Some thirty years ago I was honored by being elected President of this Association. From that time on. until the present day, I have guarded with zealous care the interests of the profession. At that time we had only about 500 members; gradually, day by day and year by year, the builders have gone onward and upward, and we have come to the time when the capstone must be placed on the great medical arch that we have erected in the State of Texas. Dr. C. M. Rosser is the man to place the capstone. I have watched with peculiar interest during the last thirty odd years, men whom I could put my hands upon who were devoted to medicine. I have always found Rosser ready and willing to do any and every duty that was assigned him, and more if it could be found for him to do. Therefore, I second the nomination of Dr. Rosser, unhesitatingly, and you need not be afraid that he won't go to the public, in the byways and highways, and explain to them that the State Medical Association of Texas is trying to inform them, for the sake of humanity. (Applause.)

Dr. W. D. Jones of Dallas: This is about the hardest thing I have ever had to do. Like Dr. Moore, I took my anatomy under the distinguished gentlement whose name he has presented. I have done more than that. As president of the Alumni Association of the Medical Department of the University of Texas, in 1917, I tried to lead the forces from the Medical Department of the University of Texas against a force intended not only to destroy the Medical Department of the University, but the University itself. I hope before this has gone much further; that the name of my distinguished friend, my teacher and one whom I love, will be withdrawn. For at this time we must, as I see it, place the mantle of authority upon the man who so well represented us in an embryo campaign, and crystallize a sentiment that enabled us to get for our people an almost ideal Medical Practice Act. I want it understood that I am not opposing Dr. Keiller. I am supporting and seconding the nomination of Dr. C. M. Rosser of Dallas.

Dr. Thos. Dorbandt of San Antonio: It is with a great deal of pleasure that I give voice to real feeling in seconding what my friend Dr. Graves had to say concerning Dr. Keiller. We all recognize his ability and know his lovable disposition, and we know him to be a man of high ideals. And what my friend Dr. Small had to say for Dr. C. M. Rosser, cannot be honestly gainsaid by anybody. But, gentlemen, these two are not the only medical men in Texas who are capable, who are qualified, who have rendered yeoman-like service and who are entitled to honor. The unfortunate thing is that we can have only one President-Elect, a year. In many respects our friend Dr. Keiller, in addition to his wonderful ability as an anatomist, stands out pre-eminently over other men of Texas. Dr. Rosser, in his ability to address a crowd on almost every and any occasion, without a moment's notice, and to sway the crowd as the wind blows a field of grain, is possessed of a wonderful accomplishment. We recognize the big way he has done things locally and throughout the State, but, gentlemen, he is not the only one who has rendered that kind of service in the upbuilding and the maintenance of the laws of the Medical Practice Act in the State of Texas; he is not the only one who has made the sacrifice of time, of money, and who has incurred the d spleasure of many people who disagreed with his views.

I have in mind a gentleman who in many ways is just as much a peer, probably, of my friend Dr. Keiller, as Dr. Keiller is his peer in many other ways; a man who is just as maiden-like, as reticent, as retiring as my friend Dr. Keiller. For that reason he is very little known outside of his home. His progenitors came to America nearly 200 years ago. They have been identified from one generation to another with the various professions; they have been men of intelligence, men of honor, men who have been leaders in their respective communities. With the exception, perhaps, of Dr. Rosser of Dallas, and Dr. Russ of San Antonio, probably not any man in the State of Texas has gone to Austin more frequently or rendered more service when my friend Holman Taylor sounded the S. O. S. for help, than has the gentleman whom I have in mind. Whenever an opportunity came for him to do a still, quiet service, he has gone unheralded, and usually he has accomplished the purpose of the call and delivered the goods. Furthermore, gentlemen, because of the vast and dense population of North Texas, compared with our section of the State, we feel that we have not had the consideration that we might have had. Southwest Texas has not had a President of this honorable body since 1914, when our beloved and sainted George Moody was elected. Dr. T. T. Jackson was elected President-Elect, but died before he assumed the office of President, when a gentleman from Fort Worth was elected and filled that term.

The gentleman whom I have in mind has never been prominent in any kind of a political campaign, or anything of that kind, although his friends did think of having him announced in Fort Worth last year, but out of deference to the gentlemen who were candidates at that time, his friends held him back. Gentlemen, in my friend Dr. Burleson we have everything that there is in either of the other gentlemen who have been nominated. He is a man whose deliberate judgment, mature deliberations, and princely character qualify him for leadership over the Alps, if the occasion should demand. With all of that, gentlemen, he is humble enough to be the servant of your servant. I nominate Dr. John Henry Burleson of San Antonio, for President-Elect of this Association.

Dr. J. W. Torbett of Marlin: I agree with the previous eloquent speakers, as to the qualifications of Dr. Keiller and Dr. Burleson, but this is the time, and especially the next two years, when we need our best, our bravest, our brainiest and our strongest men to help lead the forces and manage the affairs of our Association; to co-operate with and assist our well-trained President, Dr. Bledsoe, who will now take charge and carry out the lofty ideals of our President just retiring. I wish to second the nomination of one who is well-fitted, who is the peer of any preacher, any trained lawyer or any politician on the forum or the stump, or in the legislative halls of the State of Texas. I wish to second the nomination of Dr. Rosser of Dallas. (Applause.)

Dr. A. A. Ross of Lockhart: We have to settle this thing by votes. When the votes are counted we will all thank God that the man who is elected is going to be our President-Elect. You have heard sufficient oratory. It is with a good deal of diffidence that I undertake to follow these splendid professional—medical and surgical—orators, who have preceded me (laughter), and it is with much sorrow, along with my friend Red Jones, that I am compelled by my conscience to take a stand—to say to you where I stand in this contest. I concede the truth of much that has been said by this splendid orator from Dallas, about this other splendid orator from his same town. I concede that he is a great orator, but when he gets up by the side of the little Corsican, I feel that my friend Small has slopped over just a little bit. I concede all and more that has been said about this splendid gentleman down on the Pirate Isle. My son's diploma bears his signature, and it is with the utmost sorrow that I am placed in a position today of choosing between him and the friend of my boyhood, my young manhood, and my professional life on down until I am half as old as Dr. Graves, but I must in memory of all those things, impelled by the friendship of all these years, and believing that the profession of medicine will not suffer in Texas one moment by his election, second the nomination of John H. Burleson of San Antonio, and next to him Daddy Keiller.

Dr. P. C. Coleman of Colorado: I would pay a higher tribute to Dr. Keiller than has been paid, if it were possible. You have heard of his wonderful reputation as an anatomist. When I had the medical colleges from Canada to the Gulf to select from for a school for my own boy, I sent him to Galveston, to William Keiller. (Applause.) When I had the colleges of all this great land to select from for my grandson, I sent him to Galveston, because I believed that there he would have instruction that would be superior to that he would get anywhere in the United States. I do not stop at admiration, I love that man for the good that he has done to those who are nearer to me than anybody else in the world. I haven't the pleasure of an acquaintance with Dr. Burleson; I haven't a doubt but that every word that has been said about him is absolutely true, but there is an obligation resting on me today, gentlemen, that is above any personal reason.

I have had the honor of serving as President of the State Medical Association of Texas. In 1895, when I was elected President, and began to look around to see where I could get help, I found one man standing by my side who was ready and willing to do what was needed to promote the cause of scientific medicine in Texas. He has stood beside every man whom you have honored as President of this Association. Not long ago the question was raised by a great publication in this country, as to the greatest word in the English language. Some said "Mother," some said "Love," some said "Service"—and "Service" is probably the greatest word in the world. Who has rendered more service to the State Medical Association than this man, whom I shall have the honor to name a little later on. It is a fact known to many of you in Dallas County, that for years a condition existed there that was a menace to organized medicine in Texas. Who was it that relieved that condition? Dallas County is no longer a menace, but a credit to organized medicine. Who was it that at a time critical in our affairs, when it had reached a climax, and that some one must take hold of the problem of education and publicity, educating not only the profession, but the laity, was called on? It was this man, whom I have the honor—will have the honor to name a little later on.

Gentlemen, I believe there will be no question about it; I believe that Dr. Graves and Dr. Dorbandt and Dr. Moore, and these other gentlemen will say, "If there is one outstanding figure in the State of Texas today who can carry on to triumph this great work of education in Texas, it will be this man—whom I will name a little later on. (Laughter and applause.) Who was it had a vision when the rest of us did not know? I like a man with a vision. I love a man with a vision; I am not talking about a visionary man, but a man with a vision. Years ago, when the rest of us were not thinking about it, this man had a vision and was working along the very line that we are engaging ninety per cent of our time in arguing and trying to settle today. Gentlemen, organizations as well as individuals should be grateful. This man has rendered a service to Texas medicine, to organized medicine in Texas, that no other man has rendered, and why not at this time, this logical—this psychological time, as has been said—name him as your standard bearer for 1925. It is not necessary to call his name, because I have described the man. I want to second the nomination of Dr. C. M. Rosser. (Cheers and applause.)

Dr. W. B. Russ of San Antonio: Mr. Chairman, we have heard friendship, admiration for scientific attainments, admiration for eloquence, enthusiasm and hard work, urged in favor of those who have been mentioned, and finally we have tried the filibuster and the gag-rule to stop something that ought to be said in favor of John Burleson. I want to urge, now, common sense in the selection of a man to lead the State Medical Association of Texas. There never was a time in the history of the world when the people of this country, and particularly those representing the things we do as leaders of men, so needed leadership of the quality that distinguished the founders of this Republic—common sense. The simple virtues, the modesty that has been claimed for all of these candidates, the ability, the scientific training and all the qualities that could be urged in favor of any man, and in addition the blood, the pure blood of the kind that represented eighty-five per cent of our population when we had thirteen colonies in this country, and when we builded the greatest nation of the world, may be claimed for John Burleson. I want to urge the blood, the breeding, the qualities of common-sense, in his behalf. (Applause).

President Scott: The tellers will prepare the ballots.

(Vice-President Dr. A. A. Ross of Lockhart, in the Chair).

Vice-President Ross: Gentleman, has everybody voted? I declare the ballot closed.

The House will come to order and hear the result of the ballot.

Dr. Gambrell: The result of the ballot is as follows: Rosser, 54, Burleson, 39, Keiller, 17; no election.

Dr. Jno. T. Moore of Houston: I never saw a better-natured bunch of doctors and I do think that we should start a little school of oratory. Such men as Ross, and Small, and Osborne, and Red Jones would stand a good chance of getting the prize. I want to withdraw the name of Professor William Keiller, and if the San Antonio bunch has as much nerve, they will withdraw their candidate and join me in the motion to elect Dr. Rosser unanimously. (Applause).

Dr. Thos. Dorbandt of San Antonio: I move you, sir, that Dr. Burleson's name be withdrawn, and that the Secretary be instructed to cast the unanimous ballot for Dr. Rosser. (Applause.)

Dr. W. B. Russ of San Antonio: You bet your life we are just as game as you are. I second the motion.

ELECTION OF PRESIDENT-ELECT.

The motion was put and unanimously carried, and Dr. C. M. Rosser of Dallas was declared elected President-Elect.

(President Scott in the chair.)

The President: Nominations are in order for three Vice-Presidents.

On nomination of Dr. R. B. Homan of El Paso seconded by Dr. P. C. Coleman of Colorado, Dr. Felix P. Miller of El Paso, was elected Vice-President.

Dr. J. N. White of Texarkana, nominated Dr. J. K. Smith of Texarkana.

The Secretary: Dr. Smith is a Councilor, and cannot hold two offices. One man has been elected Vice-President now who is on the Council on Medical Defense, and cannot well be spared.

On motion of Dr. A. P. Howard of Houston, seconded by Dr. R. B. Homan of El Paso, the election of Dr. Miller to the office of Vice-President was rescinded.

The President: The name of Dr. Smith has been withdrawn. Nominations are in order for three Vice-Presidents.

Dr. N. D. Buie of Marlin: I nominate a man who represents the rank and file of the county medical societies in this State. I don't know how many know him, but I have known him long and well, and he is one of the most active members in our district; he is always there and has a quorum in his medical society. He is a tireless worker, and I think you will honor the average man in the county medical society by electing Dr. S. J. Alexander of Hearne.

Dr. C. C. Cody of Houston, seconded the nomination, and Dr. S. J. Alexander of Hearne, was unanimously elected Vice-President.

Dr. H. F. Connally of Waco, nominated Dr. J. W. Gidney of West. The nomination was seconded by Dr. R. S. Killough of Amarillo, and Dr. J. W. Gidney of West, was unanimously elected Vice-President.

On nomination of Dr. W. B. Thorning of Houston, seconded by Dr. T. R. Sealy of Santa Anna, Dr. P. H. Chilton of Comanche, was unanimously elected Vice President.

ELECTION OF TRUSTEES.

On nomination of Dr. J. D. Osborn of Cleburne, seconded by Dr. J. W. Torbett of Marlin, Dr. M. L. Graves of Galveston was unanimously elected to succeed himself as Trustee.

ELECTION OF COUNCILORS.

The President: Five Councilors are to be elected. The first is to succeed Dr. R. B. Homan of El Paso.

On nomination of Dr. F. P. Miller of El Paso, seconded by Dr. R. S. Killough of Amarillo, Dr. R. B. Homan was unanimously elected to succeed himself as Councilor of the First District.

The President: The next is to succeed Dr. Joe E. Dildy of Brownwood, whose term expires.

Dr. S. P. Vineyard of Amarillo, nominated Dr. Thomas Richard Sealy of Santa Anna, which nomination was seconded by Dr. P. H. Chilton of Comanche.

Dr. Ben M. Shelton of Brownwood, nominated Dr. Joe Dildy of Brownwood, to succeed himself, which nomination was seconded by Dr. R. S. Killough of Amarillo.

The President: I was just debating whether I should make the statement that I personally know that Dr. Dildy requested that his name should not be presented again; but if these gentlemen have any information contrary to that, I would rather not urge it before this body. Have any of you talked to Dr. Dildy lately?

Dr. Shelton: I talked to Dr. Dildy yesterday, and we think we should have him again.

During the counting of the ballots, and before the result was announced, Dr. Sealy moved that the Secretary be instructed to cast the unanimous ballot for Dr. Dildy. President Scott ruled, however, that this could not be done, and the result of the ballot was announced as follows: Dildy 66, Sealy 18.

Dr. Dildy was declared duly elected to succeed himself as Councilor for the Fourth District.

The President: Next is the Eleventh District, Dr. R. H. McLeod of Palestine, term expires.

Dr. Joe Gilbert of Austin: I nominate Dr. Bob McLeod. He has attended every meeting of the Council; not only that, when the Chairman says we are going to meet in a certain room, he comes to that room and stays there until we get through, and that is the kind of a man we want on the Council.

Dr. W. D. Jones of Dallas: I second the nomination, and move that the Secretary be instructed to cast the ballot of this society.

The motion was seconded by Dr. J. H. Gambrell of El Paso, duly put and carried, and the Secretary cast the unanimous ballot of the House for Dr. R. H. McLeod of Palestine, to succeed himself as Councilor for the Eleventh District.

The President: Dr. J. F. Bunkley, Thirteenth District, term expired.

Dr. B. A. Swinney of Cisco: I nominate Dr. J. H. Caton of Eastland.

Dr. Gavin Watson of Clarkesville: I second that nomination, and move the nominations be closed and Dr. Caton be elected unanimously. The motion was seconded by Dr. H. F. Connally of Waco, put and unanimously carried, and the Secretary cast the unanimous ballot of the House for Dr. J. H. Caton of Eastland, to succeed Dr. J. F. Bunkley of Seymour, as Councilor for the Thirteenth District.

The President: The term of Dr. A. B. Small of Dallas, expires as Councilor for the Fourteenth District.

Dr. C. P. Hannah of Dallas: I wish to nominate Dr. A. B. Small to succeed himself. The Council has endorsed his work, and he ought to be nominated by acclamation.

Dr. A. A. Ross of Lockhart: Because of his splendid oratory, I desire to second the nomination of Dr. Small.

Dr. S. A. Lundy of Fort Worth: I nominate a man who has been a big factor in this Association, Dr. W. L. Allison of Fort Worth.

Dr. P. C. Coleman of Colorado: I am not betraying any secret of the Board of Councilors, because that Board has no secrets from this House, when I make the statement that there are certain questions which are pending now of which Dr. Small has an intimate knowledge, and no other man has. I do believe it would be a great loss to the Council not to re-elect Dr. Small, and I second his nomination.

Dr. W. A. Lee of Denison: The superstition is that every Councilor for the Fourteenth District must be from Fort Worth or Dallas. I don't know what the duties of a Councilor are. I never saw but one in action, and that was in West Texas six years ago. As far as qualifications are concerned, I know a man—D. M. Higgins of Gainesville, who has at least three good ones—age, money to defray expenses in actually visiting county societies, and the time to visit them. I nominate Dr. D. M. Higgins, who has been a warhorse in the Texas State Medical Association for twenty or thirty years.

Dr. Joe Becton of Greenville: I rise to second the nomination of Dr. Higgins. He promises to get in his own car and take his own wife and visit every county society in the district, each year.

The ballot was spread and the tellers announced the results as follows: Out of a total of 79 votes cast, 39 were for Dr. Small, 27 for Dr. Higgins and 13 for Dr. Allison.

Dr. Lee: I withdraw the name of Dr. Higgins, and move to elect Dr. Small by acclamation.

Dr. Becton: The second does not agree.

A second ballot was spread, with the following results: Small 38, Higgins 32, Allison 5.

Whereupon, the President declared Dr. A. B. Small of Dallas, elected to succeed himself as Councilor for the Fourteenth District.

ELECTION OF DELEGATES AND ALTERNATE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Dr. F. P. Miller of El Paso, nominated Dr. A. C. Scott of Temple, to succeed Dr. J. W. Burns of Cuero. The nomination was seconded by Dr. J. W. Torbett of Marlin.

(Vice-President Torbett in the chair.)

Dr. A. A. Ross of Lockhart, nominated Dr. J. W. Burns of Cuero, to succeed himself.

Dr. Miller, with the consent of his second, withdrew the name of Dr. Scott, stating that he was under the impression that Dr. Burns was not present and could not be re-elected.

There being no other nominations, Dr. Burns was elected unanimously, to succeed himself as Delegate to the American Medical Association.

Dr. F. P. Miller of El Paso, nominated Dr. A. C. Scott of Temple, to succeed Dr. E. H. Cary of Dallas, which nomination was seconded by Drs. J. M. Frazier of Belton, and T. R. Sealy of Santa Anna.

Dr. W. D. Jones of Dallas, nominated Dr. E. H. Cary of Dallas, to succeed himself.

Dr. Jones then withdrew the name of Dr. Cary and moved that the election of Dr. Scott be made unanimous, which motion was carried, and Dr. A. C. Scott of Temple, was declared duly elected to succeed Dr. E. H. Cary of Dallas, as Delegate to the American Medical Association.

Dr. John T. Moore of Houston, nominated Dr. Wallace Ralston of Houston, to succeed himself as Alternate Delegate to the American Medical Association, but withdrew the motion because of Dr. Ralston's enforced absence from the meeting.

Upon the nomination of Dr. W. B. Russ of San Antonio, which nomination was seconded by Drs. T. R. Sealy of Santa Anna, and M. L. Graves of Galveston, Dr. Thomas Dorbandt of San Antonio, was unanimously elected Alternate Delegate to the American Medical Association, to succeed Dr. Wallace Ralston.

Upon nomination of Dr. John T. Moore of Houston, which nomination was seconded by Drs. A. H. Flickwir and A. P. Howard of Houston, Dr. R. W. Knox of Houston, was elected to succeed himself as Alternate Delegate to the American Medical Association.

(President Scott in the chair.)

ELECTION OF MEMBER COUNCIL ON MEDICAL DEFENSE.

Upon nomination of the President, which nomination was seconded by Dr. J. H. Gambrell of El Paso, Dr. A. P. Howard of Houston was elected to succeed himself as a member of the Council on Medical Defense.

ELECTION OF MEMBERS COUNCIL ON LEGISLATION AND PUBLIC INSTRUCTION.

The Secretary called attention to the fact that the incoming President, Dr. Bledsoe, vacates the position on the Council on Legislation and Public Instruction to which he was elected at Fort Worth, constituting an additional member to be elected.

Dr. M. F. Bledsoe, Port Arthur: In order to relieve the President of the embarrassment of nominating himself for this position, to which position he should by all means be elected, I take the liberty of nominating him from the floor, and I respectfully call upon him to make no other nominations.

The nomination was seconded by Drs. W. D. Jones of Dallas, and R. S. Killough of Amarillo, and Vice-President Torbett was called to the chair.

There being no further nominations, nominations were closed and Dr. Scott was unanimously elected to succeed Dr. M. F. Bledsoe as a member of the Council on Legislation and Public Instruction, to serve the unexpired term.

The point of order having been raised, the Chair ruled that, according to a recent amendment to the By-Laws, the Chair did not nominate but actually appointed members of the Council on Legislation and Public Instruction.

The President: The action taken awhile ago, therefore, was a bit out of order. I do not like to appoint myself to office. For the three places made vacant by expiration of term of office, I unhesitatingly reappoint those whose terms have expired, namely, Drs. C. M. Rosser of Dallas, I. C. Chase of Fort Worth, and H. W. Cummings of Hearne.

Upon request of Dr. A. A. Ross of Lockhart, the President called Vice-President Torbett to the chair.

Dr. Ross: Having served on the Council on Legislation and Public Instruction for a year, I am thoroughly impressed with the importance of that position. It would be an absolute tragedy to allow a bit of delicacy of feeling on the part of the President to interfere with his retention on that Council, and I make the motion that the House of Delegates formally request the retiring President to appoint himself to the position made vacant by Dr. Bledsoe in assuming an *ex-officio* position on the Council.

The motion was seconded by Dr. H. R. Giles of Corpus Christi, and was unanimously carried.

The President: In response to your request, I am pleased to reappoint myself to succeed Dr. Bledsoe on the Council on Legislation and Public Instruction.

SELECTION OF PLACE OF MEETING.

Dr. Joe Gilbert of Austin: I have been requested by the Travis County Medical Society to invite you to come to Austin next year. It is not necessary for me to tell you anything about Austin; most of you are as familiar with your Capital City as we are. I just want to remind you that the Legislature may be in session during that time; it was in session last year when we were meeting in Fort Worth, and we think that it would be a good idea for us to be in Austin with the Legislature once in a while.

It has been said that there won't be rooms enough in Austin for you. We don't care whether you sleep or not; we would rather you would stay up with those fellows while you are there. That would do more good than all the advertisement you could put out, and it would be a good education for you. I want to remind you, also, that your State University is there; that we have four thousand of the finest boys and girls in the United States attending that institution. Several hundred of those students are the sons and daughters of the physicians of Texas, and the physicians of Texas are the family physicians of every student in that University. They will welcome you and assist as citizens our officers in entertaining you. There are several other State institutions there which your should be interested in, the State Lunatic Asylum, for instance. (Laughter.) You can go out there and talk to the inmates and

not be misunderstood. We have the Blind Institute. If you don't want to be seen, you can visit that institution. If you don't want to be heard, you can visit the Deaf and Dumb Institute. These orations delivered this morning may be repeated at a General Session, and the Senate and House of Representatives invited to hear them.

We feel that we have ample room to take care of you. We have a new hotel, and the Driskill has dressed up—spent thirty or forty thousand dollars; it is a real good hotel now, operating on the European plan, with a nice dining room downstairs. We have plenty of cafes and restaurants in Austin. Dr. Graves, I believe, is going to invite you to Galveston. We have a few bathing beaches in Austin, and our bathing beauties will compare with those of any bathing beaches in the United States. If any of you men want to get a thrill, we can give it to you. (Laughter). We have one of the finest scenic drives in the South. If you are not satisfied with the swimming pools in Austin, I will take you down to my old swimming hole on the Colorado River, where it is against the law to wear a bathing suit. We invite you to Travis County; we will welcome you, and will try to entertain you. I make the motion that the Secretary of our Chamber of Commerce, Mr. Long, be allowed to address the meeting.

The motion was seconded and carried.

A Delegate: Make it short, Long.

Mr. Long: I have been waiting in this town twenty-four hours to invite you to hold your meeting in Austin next year. I don't know why Dr. Gilbert didn't call your attention to the school for farmers. The State Bankers' Association will meet on the 21st or 22nd of May. We are going to take care of them; at the present time we have over 2,200 people in Austin who are there in connection with the University. There are within one block of the two leading hotels in Austin, seven auditoriums that will seat from 500 to 1,000 people each, and there are eight meeting places in the two hotels, which will be available for your use.

Dr. M. L. Graves of Galveston: I haven't a word to say against Austin, except to urge that Dr. Gilbert's suggestion that you visit the Blind Institute be disregarded. I think the members of this House are very much like the bibulous Irishman who suffered a great deal of trouble with his eyes. He finally went to an oculist and the oculist examined him and said, "Why, Pat, you have chronic retrobulbar alcoholic-tox.co amblyopia. It is due to drinking alcohol, and if you don't quit drinking you will be blind in a month." And he said, "Doctor, that's all right; I have seen everything." (Laughter.)

Now, gentlemen, I hold in my hand here a cordial invitation from the Galveston County Medical Society, under the signature of its President, Dr. Earle D. Crutchfield. I also have an invitation from Dr. Keiller, the Dean of the Medical College, who places the Medical College and the hospital at your disposal, for any service which you wish them to render; an invitation from the Women's Auxiliary, of the Galveston County Medical Society, inviting you especially to bring your wives, and to be assured that those wives will be well taken care of and enjoy their visit; an invitation from the Mayor and the City Commission of Galveston, who cordially invite you, and who say that they have an auditorium which will seat 6,000 people, with many rooms on the side, which you can use for other purposes if you desire; an invitation from the Secretary of the Chamber of Commerce of Galveston, who assures you that there are hotel accommodations for 15,000 people in that little city, that auditoriums and meeting places will be provided in abundance for your pleasure and comfort, that the Commercial Association tenders to the entire body free tickets to the bathing resorts—in addition to which they will tender you a ride upon the bay, which will be enlightening to those of you who are landlubbers, and who have never seen the facilities of a large port like Galveston. In addition, I am commissioned by the citizens of Galveston to say to you that there will be a very cordial welcome for all of you, and that they will try in every way to make your stay among them pleasant and profitable. Permit me to submit this proposition in conclusion: Is there a man in this audience with soul so dead that he would prefer to go over to Austin and gaze upon the members of the Legislature rather than to come to Galveston and look at the mermaids bathing on the beach? (Applause.)

Dr. C. W. Goddard of Austin: If I were the orator my colleague Dr. Graves is, I would make a speech. I assure you that I have the biggest subject in the State of Texas, the City of Austin. The invitation has been very cordially extended to you by Dr. Gilbert, and by the Secretary of the Chamber of Commerce of the City of Austin. Some of the attractions of Austin have been pointed out by them. We don't feel that it is necessary to go into great detail, preferring to leave something to the imagination. What Dr. Graves can show you on the beach at Galveston, does not excel what we can show you in Austin.

There are one or two points that have not been mentioned. In case the Legislature is not in session, we have for your meeting places the Senate Chamber and the House of Representatives, the most beautiful places in the State for the purpose. By that time the first section of the great stadium of the University will be completed, and possibly we can arrange to demonstrate the work of our athletic department. The University athletic teams, as you all know, stand today undefeated in any single department, or any one game this season, and we feel very proud of the progress being made along those lines. We can show you some splendid games as well as other entertainments, in connection with the University. We hope to meet you in Austin next year.

Dr. J. H. McCracken of Mineral Wells: I have three telegrams from Mineral Wells, all wishing you a successful meeting here, and urging you to hold your next convention in Mineral Wells. They guarantee to you plenty of hotel facilities and rooms. I find that many of my friends here don't believe that we have hotel facilities. Come to Mineral Wells and we will show you. Many of you are from Missouri, I guess. We can take care of three or four times the number of people we have here. Mineral Wells is essentially a town of hotels and boarding houses, and we have every facility there to take care of you. Being a health resort, gentlemen, you owe it to Mineral Wells and yourself to go there, and investigate the water and see what its merits are, so you can know in the future whether or not you want to send your patients there. The people of Mineral Wells, the Chamber of Commerce, the Mayor, the Rotary and the Kiwanis Clubs, invite you to come, and if you will come we will guarantee that you will have a good time. We have a good golf course, too. Bring your sticks. If you will come, we will give you a good time and show you a good town.

Dr. K. H. Beall of Fort Worth: May I have one moment to bear witness to what Dr. McCracken said about Mineral Wells? I was there two weeks ago. I had not been there for several years, and was amazed at the very great improvement. I assure you that Mineral Wells will have no trouble in

housing this convention. I think it well for this delegation to retire for awhile to peaceful scenes, and certainly no place could be found more ideally situated than Mineral Wells. I think that this Association should know a great deal more about Mineral Wells. I cannot say that I would bear witness to everything that Dr. McCracken might say about the virtues of the waters of Mineral Wells, but I am sure that there are a great many virtues in the waters of Mineral Wells, and certainly a great many virtues will be derived from the profession visiting Mineral Wells. I hope this society will see fit to hold its next meeting there.

The ballot was spread, with the following results: Austin, 31; Galveston, 20; Mineral Wells, 6.

Austin was declared the place of meeting for the next regular Annual Session.

The President: The Reference Committee on Reports of Officers and Committees has a brief report to make at this time.

Dr. C. W. Goddard, chairman of the committee, then made the Fourth Report of the Reference Committee on Reports of Officers and Committees, as follows:

THIRD REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND COMMITTEES.

We heartily approve the supplementary report of the Board of Councilors, and recommend its adoption. Particular attention is called to the last paragraph thereof, which should have the special consideration of all county societies.

Respectfully submitted,
C. W. GODDARD, Chairman.

On motion of Dr. J. H. Gambrell of El Paso, seconded by Dr. Thomas Dorbandt of San Antonio, the report was adopted.

On motion, duly made and seconded, the House of Delegates adjourned *sine die*.

GENERAL SESSION.

President Scott called the General Session to order at 3:30 o'clock p. m., in the Travis Park Methodist Church.

President Scott: While waiting for the crowd to gather, we will attend to some business matters.

Dr. I. C. Chase, Fort Worth: As most of you know, the ex-Presidents of this Association have formed an organization, which has been devoting itself to the collection and preservation of records concerning the medical history of Texas. I have been requested to come before you and present from that body a resolution. It has been called to our attention that the medical students now graduating from the schools in our State, begin practice with hardly any knowledge of the great and inspiring medical history of America. As someone suggested —I believe it was Dr. Russ, why should not these medical students know as much about these important matters as about the Assyrians and Chaldeans, and King Tut? It is certainly necessary as a background that every medical practitioner should have something of the inspiration that comes from the work of such men as Lazear, Agramonte and Reed, of J. Marion Simms, of Crawford W. Long, the real discoverer of ether anesthesia in this country, of Ephraiham McDowell. and many more of those whose names shall go down in history. For that reason I am requested by this body to present to you the following resolution, which the ex-Presidents would be glad to have you adopt:

RESOLUTION ON TEACHING HISTORY OF MEDICINE.

"*Resolved*, that it be the sense of this body that the University of Texas and Baylor University, be requested to consider, and if possible to arrange for a course of at least six lectures on the history of American medicine, to be given either in the medical, or required in the pre-medical courses leading to the degree of Doctor of Medicine in these institutions."

On motion of Dr. A. A. Ross of Lockhart, seconded by Dr. I. L. McGlasson of San Antonio, the resolution was adopted.

The President: Is there any further business to be presented at this time? If not, we will proceed with the program. We will hear something of what Texas has *not* done for her insane. Dr. Wilmer L. Allison of Fort Worth. (Applause.)

ADDRESS OF DR. WILMER L. ALLISON.

Dr. Allison delivered an address on "What Texas Has Not Done for Her Insane," which will be published in the JOURNAL in the near future.

The President: I take pleasure in introducing to you my friend, Dr. J. A. McIntosh of San Antonio, who will address you upon the proper care and treatment of the insane. (Applause.)

ADDRESS OF DR. J. A. McINTOSH.

Dr. McIntosh delivered an address on "The Proper Care and Treatment of the Insane," which will be published in the JOURNAL in the near future.

Dr. O. L. Norsworthy of Houston: When these two able papers were read before the Section on State Medicine and Public Hygiene yesterday, a committee was appointed to take notice of them and make some suggestion or formulate some resolution in regard to them. The committee has the following resolutions to offer, and I move their adoption:

RESOLUTIONS, CARE AND TREATMENT OF THE INSANE.

Whereas, we have just listened to an expose of the deplorable conditions in the handling of our insane, epileptics, drug habitues and inebriates; and

Whereas, many efforts have been made in the past by newspapers, county judges and medical societies, without bringing about the needed change; and

Whereas, this is purely a medical matter; therefore, be it

Resolved, that the State Medical Association of Texas, now assembled in general session, place itself on record as urging the following remedies:

(1) That the laws of this State be changed so that a humiliating public trial of the insane will be abolished.

(2) That adequate room be provided in our institutions, so that our insane may not be held in jail.

(3) That one or more psychopathic hospitals be established where such patients may voluntarily seek observation and treatment, and where acute cases and questionable criminal cases, can be immediately sent for observation and study.

(4) That a separate institution be established for the care and treatment of the criminal insane.

(5) That a separate department be provided for the care and treatment of the alcoholic and narcotic cases, and proper laws be placed on our statute books governing the commitment of these cases.

(6) That a separate department be provided at the Epileptic Colony for the care of the insane epileptics.

(7) That a commission be created, composed of individuals properly qualified, the majority of whom shall be physicians who have had at least three years experience in the treatment of the insane in the State institutions, to have control of all institutions handling the insane, epileptics and drug habitues, said commission to replace the present Board of Control in this particular.

(8) That a careful study be made of the question of sterilizing certain classes of the insane, feeble-minded and unfit, and of their marriage.

(9) That the President of this Association be authorized to appoint a committee of seven, whose duty it shall be to study the above problems and take the necessary steps to carry out this program.

O. L. NORSWORTHY, M. D., Houston.
JAS. GREENWOOD, M. D., Houston.
W. L. ALLISON, M. D., Fort Worth.
J. A. MCINTOSH, M. D., San Antonio.

The motion was seconded by Dr. J. J. Terrill of Dallas, and passed by unanimous vote.

The President: This Association is most fortunate in many, many respects. It is fortunate in its size, in the quality of the doctors who compose it—doctors who may well be proud of their accomplishments in the past, satisfied with the selection of such a beautiful place as San Antonio for their meeting, but you have one more thing to be satisfied about. You have with you one of the most distinguished physicians on the American continent. I say most distinguished because he will be the next President of the greatest body of medical men on the face of the earth, the American Medical Association. (Applause.) It is indeed a great pleasure to introduce to you the President-Elect of the Americal Medical Association, Dr. W. A. Pusey of Chicago. (Applause.)

ADDRESS OF DR. W. A. PUSEY.

Dr. Pusey: Before proceeding to the business of this occasion, may I stop long enough to present to this society the greetings and good wishes of the American Medical Association? I am here by permission of the Association to testify by the presence of one of its officers, to the interest of the Association in this great society. The Association itself is doing very well, but that is not a matter of great importance. The state medical societies make the American Medical Association great; there is only one thing of greater importance, and that is the aggregate of the county medical societies and district medical societies. It is not surprising, therefore, that the Association has the greatest interest in these societies. They mean its existence; when they are prosperous, when they are enlightened, the American Medical Association is the same. We cannot do your business for you; we should not try; but we can help you, and I am here to say that we are at your command, to serve you in any way that we can. (Applause.)

Dr. Pusey then delivered an address on "Syphilis as a Sanitary Problem."

The President: The Secretary will report upon the election of officers.

NEWLY ELECTED OFFICERS.

The Secretary: The House of Delegates directs me to report to you the election of the following officers for the ensuing year:

President-Elect, Dr. C. M. Rosser of Dallas

Vice-Presidents, Drs. S. J. Alexander of Hearne, J. W. Gidney of West, and P. H. Chilton of Comanche.

Councilors: First District, Dr. R. B. Homan of El Paso (re-elected); Fourth District, Dr. Joe E. Dildy of Brownwood (re-elected); Eleventh District, Dr. R. H. McLeod of Palestine (re-elected); Thirteenth District, Dr. J. H. Caton of Eastland; Fourteenth District, Dr. A. B. Small of Dallas (re-elected);

Trustee, Dr. M. L. Graves of Galveston.

Delegates to the A. M. A.: Place No. 1, Dr. J. W. Burns of Cuero (re-elected); Place No. 2, Dr. A. C. Scott of Temple.

Alternate Delegates to the A. M. A.: Place No. 1, Dr. Thomas Dorbandt of San Antonio; Place No. 2, Dr. R. W. Knox of Houston (re-elected).

Council on Medical Defense, Dr. A. P. Howard of Houston (re-elected).

Council on Legislation and Public Instruction, Dr. A. C. Scott of Temple, to fill the unexpired term of President Dr. M. F. Bledsoe, and Drs. C. M. Rosser of Dallas, I. C. Chase of Fort Worth, and H. W. Cummings of Hearne, all succeeding themselves.

The next place of meeting will be in Austin.

The President: Dr. A. B. Small will bring forward the President-Elect and introduce him.

Dr. Small: It affords me additional pleasure to make the statement which I am going to make, because it is in the presence of so distinguished a guest as the President-Elect of the American Medical Association. Your President-Elect does not come to you in response to what is unfortunately sometimes the case, political expediency, but in response to the appreciation of the House of Delegates of service rendered for many years. (Applause.)

Dr. Rosser fills a unique position, a position which he fits so completely that it looks as if the place had been created for him, and him for the place. It might not be amiss in the presence of our distinguished guest, to say that we feel that we can hear the clanking of arms on our borders, and that a wolfish defiance has been thrown at us. Back of us is the love, the loyalty, and all of the weaknesses of organized medicine; in front of us a tremendous undertaking. I have the pleasure of introducing to you the peculiar man who will make a winning, our present President-Elect, Dr. Rosser. (Applause.)

ADDRESS OF DR. C. M. ROSSER.

Dr. Rosser: I am not vain enough for a moment to believe the intemperate things said of me are true, but I am one of those who thinks that a man's friends should be permitted to speak just as highly of him as they care to, for there is such a thing as the law of compensation, and when some other time some man whose affections towards me have been poorly developed shall say things of me which wound my feelings or offend me should I hear them, I shall remember the kind words spoken by my splendid friend, and smile to think that I am still ahead. (Laughter.)

It is unique in one regard that I am elected here. I became a member of the State Medical Association in San Antonio exactly thirty-six years ago. If I have missed a meeting since then I do not recall it. That indicates that I have been generally very well, for nothing except ill health or incapacity due to some disability which I could not avoid, would have detained me, and I now serve on you notice that for thirty-six years more you will have trouble with me. (Applause.)

I occupy a unique attitude not only in medicine, but in the world. I am the oldest young man and the youngest old man of whom I know. (Laughter.) I can look backward without becoming dizzy—it isn't so awfully far; and I can look forward, I trust, with vision that is reasonably clear. It would be indelicate in me to assume, and I could not do it, that the confidence which has been reposed in the leadership which will soon be, is due to my personality. Very few men are fortunate enough to have personalities which would satisfy the critical judgment of even their friends. There never has been a day that I was not conscious of having good friends, and equally conscious of having violent enemies. It was a saying of some ancient man, brought down to us by Plutarch, that "He who would be saved must have good friends and violent enemies, and he is perhaps

best off who possesses both." I cherish appreciation and love, and the deepest affection for my friends, and I hate no man. Hate is a consuming fire and burns from within. There is not a man who attended the State Association this year whom I would not warmly hail as my friend, and give him that same loyal, fraternal consideration which I covet—not one. We have a common cause; we would combat disease. We have a common cause; we would be worthy of our calling. We would cause our enemies to surrender, whether they be insect life, microscopic insect life, or insect life masquerading as human beings.

I am heartened to the core, not because I feel equal to the responsibilities which have come to me—it humbles me to know that such capacity as I have shall be taxed to the uttermost. I am going to render to your splendid President, who shall preside during the coming year, such service as he may command. I am going to be as loyal to my chief as my sense of obligation and responsibility can dictate. I shall be disappointed if he does not find work for me to do. We will come and see you. The House of Delegates has certainly been wise in this, that it has furnished the ammunition for such a battle as has not before occurred in this Union. The encroachment of ignorance, which has come throughout the years, and which has worried the medical profession in most of the states, has been an indoor pastime with some of us for a little while; it is a pastime now upon the battlefield until the war is finished. And just this particular thing that I want to say, not many have been devoting themselves to this service. Modestly, they have retired to their own labors, sometimes forgetting to applaud the sacrifices of others—sometimes with a feeling, no doubt, that they were not in a position for personal leadership and active service. I feel quite sure that Dr. Bledsoe will determine for himself, with the advice and counsel of those he may call about him, just who of the number needed can be called into service, and volunteers will be welcome, but conscription is going to be the rule. It is now well understood that the medical profession stands for purity within, has purposes which cannot be doubted, ambitions which are lofty, ideals which are even beyond human advancement. Planted upon this ample foundation of self-respect and the approbation of the public, we are going to say to the people of Texas, we shall not only help you, but we shall see that you are not hurt. And no man is too feeble to render service, and no man too high to give service when he is called.

I thank you sincerely. I intended to make a speech, but I find that my feelings are too much in evidence, and I cannot think as clearly as I should. (Applause.)

The President: I have often said that this Association needs for its guidance men of vision, men of hope, men of lofty aspiration, of business judgment, who are willing to sacrifice and who have demonstrated their earnestness and their willingness to go forward with anything that seems right for the interests of this Association, and it gives me a great deal of pleasure to turn over this gavel to one who fits that description in every respect, Dr. M. F. Bledsoe of Port Arthur, our President. (Applause.)

President Bledsoe: I would like to tell you a story, but I think you feel that you are going to get just as nearly as possible a business administration. I have to work at home, and I think I should work with you. I want to acknowledge the responsibility of the position; I confess to you I feel it, not only as President, but as Chairman of your Council on Legislation and Public Instruction. Some one said this morning that we are attempting some things that are not definitely known to ourselves to be proper. I would like to know what man there is who can see so far ahead that he is certain that things he attempts are bound to turn out just right. If we don't have visions, and work to them, I don't know how we are going to accomplish very much.

The Council on Legislation and Public Instruction, and your President, charge you Delegates and you members to return home and convey this message. We want counsel and advice, and we want constructive criticism. It is your business we are trying to take care of, and we want you to remember that. Too often, I am afraid, those who attend the scientific sections get so much pleasure out of our annual sessions, and have such opportunities for enjoying the social privileges that are extended that they forget they are delegates also. They should report what happened at the annual session. They should not put all the burden on the Delegates, who sit and work hour after hour upon the business affairs of the associations.

Your House of Delegates this morning cleared the way for greater work, in that the dues were increased. The money raised by the increased dues, is turned over to the Board of Trustees. They will appropriate it for worthy purposes, to different councils and for different causes. It is not necessary to call your attention to the personnel of the Board of Trustees, Drs. John T. Moore, M. L. Graves, W. B. Russ, W. R. Thompson and Jno. S. Turner. With their advice and counsel on the one hand, with you, out there in the ranks, to guide us, on the other, we cannot go very far wrong.

Having a little more funds to operate on, we are going to give you a surprise. We are going to send out a man to look you in the face occasionally. Your State Secretary has written so many letters they are frequently not even read. Some of you will remember some years ago, I don't know how long, when some one encored the name of Holman Taylor, I said "If you will go back home and get your County Societies to answer Holman's Taylor's letters and attend to business, you will do him greater honor than when you cheer him, because he is a man of service; you have heard time after time that he is the best State Secretary, and he is; he is here for service and he wants to serve you. Now, if we can possibly find the time, we are going to have him visit your County Societies, and get better acquainted with you. (Applause).

These wonderful addresses we have heard here are just a start, a plugging up on our educational campaign. The care of the insane, the reorganization of the State Board of Health, the vital statistics of Texas will all receive our attention this year.

Next year we go to Austin. Austin is not a great, large city, with wonderful accommodations, but I understand that it is perfectly capable of taking care of a thousand or fifteen hundred, or two thousand people next year, and doing it in a creditable way. Go back home, every one of you, and start tomorrow to boost attendance next year. The Legislature may be in session and you may have the opportunity of looking in the faces and shaking hands with some of the greatest men that this State has ever seen or ever will see. (Laughter).

With that parting remark, I shall not burden you longer. Mr. Secretary, is there any further business to come before this Association?

The Secretary: None on the Secretary's table, sir.

The President: I declare the Fifty-Eighth Session of the State Medical Association of Texas adjourned *sine die*.

MISCELLANEOUS

ORTHOPEDIC SURGEONS ORGANIZE.

Following a luncheon and general program, at the Menger Hotel, April 30, 1924, the orthopedic surgeons of Texas formed a society, to be called the Texas Society of Orthopedic Surgeons, the membership of which will be limited to orthopedic surgeons. Among those present were Drs. W. B. Carroll and B. L. Schoolfield, Dallas; J. B. Bost, Houston, C. F. Clayton, Fort Worth; Ernest P. and Edward A. Cayo, San Antonio.

The following officers were elected: President, Dr. Edward A. Cayo, San Antonio; First Vice-President, Dr. W. B. Carroll, Dallas; Second Vice-President, Dr. S. D. David, Houston; Secretary-Treasurer, Dr. J. R. Bost, Houston.

ANNUAL MEETING STATE PATHOLOGICAL SOCIETY.

The State Pathological Society of Texas met April 28, in the Pink Room of the Gunter Hotel, San Antonio, in conjunction with the Annual Session of the State Medical Association. A very interesting program was had, and the attendance was unusually good. An out-of-state guest on the program, Dr. C. E. Roderick, of Battle Creek, Michigan, read a very instructive paper entitled, "Complement Fixation Test for Syphilis (A Motion Picture Demonstration of Technique).

The following officers were elected for the ensuing year: President, Dr. B. F. Stout, San Antonio; Vice-President, Dr. A. H. Braden, Houston; Secretary, Dr. W. W. Coulter, Houston. Dr. Stout was elected as representative to the National Society of Clinical Pathologists, which meets in Rochester, Minnesota, during the first week of June.

HEALTH OFFICERS MEET.

The Annual Meeting of City and County Health Officers was held April 28, at San Antonio, in conjunction with the Annual Session of the State Medical Association. Approximately fifty health officers were present.

Dr. Malone Duggan, State Health Officer, presented an address to the assembly on "Every Health Officer a Representative of the State Board of Health."

Dr. A. P. Harrison, Director of the Bureau of Sanitation, explained the duties and the jurisdiction of health officers.

V. M. Ehlers, State Sanitary Engineer, discussed violations of the sanitary laws.

Dr. H. Garst, of the Bureau of Child Hygiene, Dr. W. W. Battle of the Pure Food and Drug Bureau and Dr. C. E. Durham, Director of the Vital Statistics Bureau, explained the functions of their respective bureaus and proffered their assistance to the health officers.

Following this program a general discussion of health problems and duties of health officers, was engaged in by all present. The meeting was considered both instructive and helpful.

NEWS

State Board Examinations will be held June 17-18-19, at Austin. Examinations are scheduled to begin at 9 a. m. on the first day and close at 6 p. m. on the last day. Junior examinees will turn in their oath cards with their answers to the questions on pathology. All applicants desiring to stand these examinations should communicate at once with the Secretary of the State Board of Medical Examiners, Dr. T. J. Crowe, Dallas, Texas.

Physician for Aged Masons' Home.—Dr. E. C. Hancock of Arlington, was elected as the official physician for the Home for Aged Masons at Arlington at a recent meeting of the board, which was held at the Gunter Hotel and was presided over by Judge Ed R. Bryan of Midland, as chairman. Other members present were W. M. Fly, Gonzales; C. L. Alderman, Dallas. W. J. Brown, superintendent, was present also.—*San Antonio Light.*

The Conviction of a Chiropractor, J. E. Guyton, in the Brewster County Court for violation of the Medical Practice Act, resulted in a sentence of one hour in jail and a $50.00 fine. The trial was before County Judge James Burke, May 19, the case being prosecuted by County Attorney John Perkins, assisted by District Attorney Bryan Montague. The injunction feature of the Medical Practice Act will be applied in this case, and the result will be watched with great interest.

Texas Physician Oklahoma State Bacteriologist.—The appointment of Dr. H. C. Ricks, for two years attached to the staff of the Sherman Hospital, as State Bacteriologist of Oklahoma, with headquarters at Oklahoma City, has been announced. Dr. Ricks has been making his home in Durant, Okla., for some time. Dr. Ricks assumes his new position about July 1, after taking a special course in bacteriology and pathology in the Army Medical College at Washington, followed by visits to the public health laboratories of North Carolina, Tennessee and Georgia.—*Dallas News.*

Prize Essay Competition.—Preliminary announcement of a prize essay competition on the vitally important subject, "The Interrelationship of Hospital and Community," is made in the June issues of *The Modern Hospital* and *The Nation's Health.* Three cash prizes of $350.00 $150.00 and $100.00 will be awarded, and there will be such honorable mentions as may be authorized by the Committee on Awards.

The purpose of this competition is to concentrate the thought of hospital, public health, medical and social-welfare workers on this timely subject for the purpose of crystallizing opinions and defining future objectives. The general program for the competition may be obtained on and after June first from The Modern Hospital Publishing Co., Inc., 22 East Ontario Street, Chicago, Ill.

A Modern City-County Hospital for Sulphur Springs was decided upon at a meeting recently of the Sulphur Springs Chamber of Commerce, which was called by Dr. W. W. Long. Attention was called to the fact that the tax rendition for the county was approximately $9,500,000, and that the county's bonded indebtedness was in good shape to permit the voting of bonds for this purpose. It was estimated that the cost of building, equipment and maintenance would not exceed one-tenth of 1 per cent, or the equivalent of $1.25 for the average taxpayer per year. The following committees were appointed to work out the details and report at a meeting to be held later: Committee on Location, Edgar Butler, Drs. White and Stirling, Mrs. Kline and E. L. Ashcroft; Committee on Building and Equipment, Drs. Long, Longino and Pickett and Bob Hewing; and Committee on Bond Issue and Maintenance, Ed Green, J. A. Dial, L. H. Gould and W. W. Evans.

Physicians Wanted by United States Civil Service Commission.—Applications will be received up to June 30, 1924, to fill existing vacancies in the following branches of the United States Civil Service, in New England:

Physician, Grade A, Neuropsychiatry: U. S. Veterans' Bureau, Boston, Mass., salary $3,000 per annum; four vacancies in the U. S. Veterans' Hos-

pital at West Roxbury, Mass., salary $1,800 per annum, with headquarters, subsistence and laundry; one vacancy in U. S. Veterans' Hospital at North Hampton, Mass., salary $1,800 per annum and headquarters, subsistence and laundry.

Physician, Genito-Urinary: One vacancy in U. S. Veterans' Bureau at Boston, Mass., salary $1,500 per annum, part-time duty.

Physician, Orthopedic Surgery and Prosthetics: One vacancy in U. S. Veterans' Bureau at New Bedford, Mass., salary $1,200 per annum, part-time duty.

Acting Assistant Surgeon, Roentgenology: One vacancy in the United States Public Health Service, New Haven, Conn., salary $3,000 per annum.

A full description of the examination is contained in Form 2400, and the required application form, 1312, may be secured from the Secretary of the Board of Civil Service Examiners at the postoffice at any of the places named above, or from the Secretary of the U. S. Civil Service District, Customhouse Tower, Boston.

Preliminary Examinations for Appointment in Medical Corps, Regular Army, will be held at various stations in the Eighth Corps Area (which includes Texas, Oklahoma, New Mexico, Colorado and Arizona), during the period of July 28-August 2, inclusive. The eligibility requirements are: Graduation from an acceptable medical school, one year's hospital training subsequent to the completion of a four-year course in medical college, or in lieu thereof one year as a medical officer of the United States Army between April 6, 1917, and July 1, 1919, and the age of applicant must be between 22½ and 31½ years at the time of examination.

Former officers of the Medical Department, Regular Army, honorably separated from the service and within the age limit, will be permitted to compete in the examination on the same basis as other applicants.

Applications will be made on Form No. 88, A. G. O., which may be obtained at any military post or station, or from the Adjutant General of the Army. Candidates who are found qualified by the Central Medical Department Board and who are not already members of the Medical Officers Reserve Corps, will be recommended for commission as first lieutenants. Such candidates will be ordered to active duty under their reserve commissions, to report to the Medical Field Service School, Carlisle Barracks, Pennsylvania, or to such other place as the Surgeon General may recommend. At the expiration of approximately four months of observation and instruction, the candidates will be given their final examination. Successful candidates will then be appointed first lieutenants in the Medical Corps, Regular Army. Candidates found not qualified, or not desiring to accept appointment in the Regular Army, may be relieved from active duty, or discharged from their respective commissions in the Officers Reserve Corps.

Additional information will be furnished on application to Headquarters, 8th Corps Area, Fort Sam Houston, Texas. Should unavoidable reasons prevent applicants taking preliminary examinations during the week of July 28-August 2, 1924, arrangements for a special examination may be made by correspondence.

SOCIETY NEWS

Bexar County Medical Society met April 3, 1924, with sixty members and three visitors in attendance.

Dr. J. W. Burns of Cuero, read a paper on "Uterine Prolapse." The author pleaded for recognition of the fact that the great majority of these cases are caused by a pelvic floor that has been weakened by childbirth. The anatomy and physiology of the structures that act as uterine supports, were gone into in detail. He reported good results in selected cases from the Watkins-Wertheim operation, but did not believe that there was any one operation that could be used in all cases.

Dr. C. C. Cade, discussing the paper, stated that he had done the Watkins-Wertheim operation in two women who had not reached the menopause. During menstruation the uterus became very heavy and caused considerable pain by pressing upon the bladder. For this reason, he could not advise this operation in women before the menopause.

Dr. Minnie C. O'Brien had seen a case of complete procidentia in a woman of 72, who, in spite of systolic blood pressure of 210, had successfully withstood an operation under gas-oxygen and local anesthesia. The Murphy modification had been used and the result was very satisfactory.

Dr. S. P. Cunningham said that the mechanics and anatomy of the pelvis should be constantly kept in mind. There have been reports of cases of congenital retroversion, but as a rule, there is first a disturbance from a weakening of the lower support, as a result of stretching and relaxation of the levator ani following confinement. After confinement, it must be seen that the lower sheath is left in as nearly a normal position as possible. In performing the Watkins-Wertheim operation, a firm, good-sized uterus is essential.

Dr. Homer T. Wilson agreed with Dr. Burns that all cases of uterine prolapse occur after childbirth. He thought that the planes supported the uterus from side to side and from before backward, but that the pelvic floor was the main support. It is simply a case of hernia, and should be treated as hernia elsewhere is treated. As a general rule, he considers it best to perform a supra-vaginal hysterectomy. The repair can be done below. This removes the heavy uterus, and makes a recurrence nearly impossible. He thought that in the near future the Watkins-Wertheim operation would be given up, as it is not feasible in a great majority of cases. He did not think that the Mayo operation could always give good results, since the round ligaments are often relaxed and atrophic.

Dr. P. I. Nixon agreed with Dr. Wilson that it was usually best to perform a hysterectomy and then make the repair. He was not in favor of anchoring the uterus to the abdominal wall, as there is always a possibility of intestinal obstruction. When the uterus is not removed, there is greater danger of malignancy occurring. He had seen one such case following ventral fixation.

In closing, Dr. Burns said that the worst cases of prolapse that he had ever seen had followed hysterectomy performed for the cure of the condition. No matter what method is employed, the results will often be unsatisfactory in old women with atrophied pelvic floors. He had never seen such results as had been reported by Dr. Cade, and he believed that in selected cases the Watkins-Wertheim operation would give good results.

Dr. D. T. Atkinson read a paper on "Intralaryngeal Growth," in which he reported the case of a patient in which he had done a complete Laryngectomy for carcinoma, over a year ago. The patient was present and could make herself understood fairly well. She showed every evidence that a permanent cure has been established. He reported another case of malignancy in which a laryngectomy had been refused, but in which a partial laryngectomy had been done, which gave relief for a short time, the patient eventually succumbing to the malignancy. Two other cases were reported, emphasizing the value of removing a section of a growth prior to operation.

Both of these cases proved to be malignant, and the removal of the growth cleared up the annoying symptoms. Dr. Atkinson advocated direct rather than indirect laryngoscopy, and illustrated the advantages of the former by schematic drawings.

The discussion was opened by Dr. T. J. Walthall, who said that many specialists are now advocating the use of the direct rather than the indirect laryngoscope. He stated that a section of the laryngeal growth should be made by a microtome, and examined. If malignancy is present, the laryngectomy should be done at once. It is very important to study the extent of the growth, since a partial laryngectomy might be sufficient if only the soft tissues were involved. He thought that fewer specialists were doing laryngectomy than formerly.

Dr. Crockett said that radiation therapy had not been perfected in this work. He had seen one case of laryngeal malignancy that had been kept going for eighteen months on moderate doses of *x*-ray, although the patient was a salesman and used his larynx constantly. When this patient was last seen, the growth appeared to be stationary. He believed that both *x*-ray and radium should be used, in conjunction with surgery, in this case. Since the mucous membrane of the larynx is very sensitive to radiation, it will be difficult to arrive at the proper dosage.

Major J. H. Trinder said that all laryngeal growths should be considered malignant, or *potentially* malignant. He believes the Killian-Lynch suspension apparatus gives the operator freer use of his hands. Radiation wastes time because malignancy calls for complete removal. The results from laryngectomy are at first very distressing, but the patients can often educate themselves so that they can be fairly well understood. In advanced malignancy, the growth may act in a valve-like manner and radium can then be used to shrink the growth and relieve the obstruction. A thorough chest examination should be made, including both physical and radiological examination, since a laryngectomy would be useless if the nodes at the base of the lungs were involved. In such cases, radium or *x*-ray alone should be used.

Dr. I. L. McGlasson had observed one case for the past four years, in which the patient had undergone a laryngectomy at Johns Hopkins. This patient had not had radium for the past eighteen months. He had seen another case of laryngeal cancer, in which a total laryngectomy had been done. The prognosis in this case was still undetermined. He had seen one case in which the growth had been transfixed with radium through the suspension apparatus. The voice came back but the lung metastasis eventually caused the death of the patient. He agreed with Dr. Atkinson that early diagnosis and complete laryngectomy was the best procedure, and that radiation should be used after surgery had done all that it could do.

Dr. E. M. Sykes said that the question of diagnosis was most important, but could not be relied upon. He mentioned the case of one of the German Emperors who died of a malignancy of the larynx, although one of the world's greatest pathologists, Virchow, had pronounced the growth benign. He agreed that direct laryngoscopy was a great aid to diagnosis. St. Clair Thomas of England, had reported about twenty cases in which he had had good results from laryngeal fissures. Dr. Sykes reported a laryngeal fissure for malignancy, performed last December. The operation had been followed by radiation. The patient had remained well up to the time of his report. He used laryngectomy only as a last resort.

In closing, Dr. Atkinson said that a partial removal of the larynx might result in changing an intrinsic to an extrinsic growth. He quoted three of the laryngoscopists in this country who are doing the most of that work, and the concensus of opinion seemed to be that a complete laryngectomy is nearly always preferable to a partial one. He believes the Lynch suspension laryngoscope more difficult to use than the ordinary direct instrument.

Dr. Frederick Earl Glaumer was elected to membership.

Bowie County Medical Society met April 25, at Texarkana, with the following present: Drs. Hibbitts, Portwood, White, J. K. Smith, C. A. Smith, Kittrell, Hays, Middleton, Murry, Womack and Robison.

Dr. G. A. Hays read a paper on "Modern Methods of Treatment of Specific Urethritis in the Male," which received generous discussion.

Dr. J. K. Smith, councilor of the district, made a report on the Northeast Texas District Medical Society meeting, which was held in Clarksville, April 8. He announced that the next meeting of this society would be held in Texarkana, October 14.

Resolutions were drawn up by Dr. J. K. Smith and adopted by the society, in which the attitude of Bowie County Medical Society toward public health matters and sanitation was set forth, and a committee from Bowie County Medical Society was appointed to confer with a similar committee from the Miller County (Arkansas) Medical Society, "whose duty it should be (1) to investigate the public health needs of the community; (2) assist in the co-ordinating and confederating of public health activities of the community under the guidance and direction of competent medical men, and (3) to take such action as is necessary to interest the city and county authorities, benevolent institutions, associations or foundations, and the general public, in organized public health administration. The committee appointed is composed of Dr. J. N. White, chairman, and Drs. William Hibbitts and S. A. Collom.

Brown County Medical Society met in Brownwood, April 8, with a good attendance.

Dr. W. O. Ott of Fort Worth, read an interesting and instructive paper on "Spinal Cord Tumors."

Dr. H. Romines was received on transfer, from the Kaufman County Medical Society.

Resolutions regarding the death of Dr. A. E. Cearnal of Indian Creek, were read and adopted.

Cameron County Medical Society met at La Feria, April 24, with the following members present: Drs. Cash, Cole, Hunter, Loew, McBride, Spivey, Sizer, Tribble, Utley, Vinsant, B. M., B. O., and R. L. Works and Yantis. The following visitors were also in attendance: Drs. Clark and Thorning of Houston, Webb, Whigham and Case of Hidalgo County, Watkins of Harlingen and Jackson of Rio Hondo.

Dr. W. A. Clark read a paper reporting urological cases, which was illustrated by lantern slides. The paper was discussed by Drs. Utley, Webb, Vinsant, Whigham and Thorning.

Dr. G. R. Yantis described a recent case of gallbladder and kidney disease, it being undetermined which was the primary condition. This paper was discussed by Dr. W. A. Clark.

The secretary of the society announced that all dues and assessments for the year had been paid, and all definite obligations of the society to date met. He also announced that six members had sent in $10.00 each toward the publicity and educational fund.

Those present were given a supper and entertained with an interesting program of songs and readings, given by the Ladies' Civic Club. The program was concluded by a highly convincing paper on "Medical Education of the Public," by Dr. W. B. Thorning of Houston.

The next meeting of the society will be held in June, at San Benito.

Dallas County Medical Society met May 8, with 59 members present.

Dr. Raworth Williams read a paper entitled "Non-Surgical Management of Kidney and Ureteral Stones," which was discussed by Drs. H. L. Cecil and A. Clay Gilbert.

Dr. Geo. L. Carlisle read a paper on "Diagnosis Between Thyrotoxicosis and Neurosis," which was discussed by Drs. Roy Goggans, H. I. Gosline, J. S. Turner and G. D. Mahon.

Dr. C. M. Rosser gave an outline of the educational campaign to be inaugurated by the State Medical Association in June, for which purpose Dr. Fowler, secretary of the Dallas County Society, stated that $1,075 had been collected from the membership of that organization.

Dr. R. H. Millwee reported that the Clinic Committee had prepared a list of 300 clinics, copies of which will be placed with clerks of the various hotels and hospitals of the city.

A committee consisting of Drs. F. A. Pierce, O. M. Marchman, C. R. Hannah, J. H. Marshall, F. H. Newton and D. L. Bettison, was appointed to arrange for a meeting honoring Dr. C. M. Rosser, President-Elect of the State Medical Association.

Drs. C. B. Sacher and W. H. Probert were elected to membership.

DeWitt County Medical Society met in Cuero, May 21, with the following members present: Drs. Milner, Frobese, Brown, Jr., Eckhardt, Burns, Gillette, Pridgen and Nowierski, Sr. and Jr.

Dr. J. R. Frobese reported the case of a girl five years of age, infected with gonorrhea.

Dr. H. H. Brown, Jr., reported a case of myelogenous leukemia.

Dr. H. C. Eckhardt reported a case of purpura hemorrhagica, following an infectious disease, with recovery. He also reported a case of dog bite, in which the antirabic treatment was being administered.

Dr. J. C. Dobbs reported two cases of mistaken diagnosis, emphasizing the necessity of more careful and painstaking examination of patients.

Dr. L. W. Nowierski, Jr., read an article on pyelitis by Dr. Lowenberg.

Dr. G. T. Reuss of Cuero was elected to membership.

A motion was passed that $40.00 be appropriated for the use of the Council on Legislation and Public Instruction.

The next meeting of the society will be held June 4, at Yorktown.

Medina-Uvalde-Maverick-Val Verde-Real-Terrell-Edwards-Kinney and Zavalla Counties Medical Society met at Del Rio, April 10, at which time the following program was rendered: "Presidential Address," Dr. Lorenzo Cantu, Eagle Pass; "The Use of Digitalis," Dr. W. E. Nesbit, San Antonio; "Diabetes Mellitus," Dr. B. F. Orr, Del Rio; "Treatment of Carcinoma of the Cervix," Dr. Chas. C. Cade, San Antonio; "Diagnosis and Treatment of Syphilis," Dr. I. L. McGlasson, San Antonio; "Cardiovascular Complications of Obesity," Mr. C D. Steinwinder, San Antonio; "Combined Method of Treating Malignancies," Dr. Dudley Jackson, San Antonio. Dr. M. A. Ramsdell of Eagle Pass, retiring secretary, read his annual report.

Tarrant County Medical Society met May 6, with thirty-five members present.

Dr. S. J. R. Murchison read a paper entitled "Folliculitis, with Report of a Case." The author stated that folliculitis is usually a painless complication, and that ordinary irrigations do not reach the infection in the urethral glands, crypts of Morgagni and paraurethral glands. The disease may exist for years, practically unnoticed by the patient. There is usually a history of relapses under treatment or recurrence without exposure. The urine may show comma-shaped shreds. The diagnosis is made by palpation of the urethra, over a sound, or by the urethroscope. The most successful treatment in the hands of the author has been electrolysis, a current of 2 to 6 milliamperes for a period of from two to three minutes. There is practically no pain attached to this procedure.

The paper was discussed by Drs. R. S. Mallard and J. H. McLean.

Dr. George Underwood of Dallas, read a paper entitled "Gastro-Jejunal Ulcer," in which the fact was brought out that 1.3 per cent of patients who have had a gastroenterostomy develop ulceration at or around the point of anastomosis. Among the factors enumerated as probable causes of the condition were (1) hyperacidity, (2) permanent suture material, (3) trauma to tissues of jejunum, (4) infection from old ulcer, and (5) foci of infection in other parts of the body. The symptoms may appear immediately, or as late as eight to ten years after the operation. Hemorrhage occurs in 39 per cent of the cases. If medical treatment does not quickly improve the condition, surgery should be resorted to. As a prophylaxis against the development of gastro-jejunal ulcer, the following suggestions are made: Discontinuance of non-absorbable suture material; cleaning up of all foci of infection; watching the diet, and being careful to pulverize all ingested foods.

The paper was discussed by Drs. E. H. Bursey, J. H. McLean and Ross Trigg.

Dr. R. S. Mallard read a paper entitled "Unilateral Polycystic Kidney: Report of a Case." He stated that the most plausible theory of the etiology of polycystic kidney is the failure of the developing tubules to unite with the corresponding glomeruli, or an excess of either. The condition is bilateral in 98 per cent of the cases. The most important diagnostic syndrome is hematuria and bilateral masses in the kidney regions. The pyelogram shows a long, narrow pelvis. Surgery offers a good prognosis, providing the opposite kidney is functioning normally and does not show a similar condition. The paper concluded with the report of a case of unilateral polycystic kidney, in which a nephrectomy was done, with complete recovery of the patient.

The paper was discussed by Dr. Ross Trigg.

The transfer of Dr. R. S. Mallard from Bell County Medical Society, was received.

Travis County Medical Society met May 8, at the Driskill Hotel.

Dr. Harvey Matthews, a graduate of the University of Texas, and of Columbia University, was the guest of honor.

Dr. Matthews is now Associate Professor of Gynecology and Obstetrics in the Long Island College Hospital, Brooklyn. He addressed the society on the subject of "The Use of Radium in Gynecology." He stated that radium should be more generally studied, as it is a powerful curative agency, but it should be used only by those skilled in its use, and the public should be educated to avoid the quack who attempts to wield the magic name of radium to draw unsuspecting patients. Radium will not cure advanced cases of cancer. It is the most powerful agency known in dealing with early cases, and the public should be taught to seek medical advice upon the first appearance of suspicious growths. Radium is also useful in dealing with fibroid tumors. He

pointed out that pelvic bleeding was a danger signal in the development of such tumors.

The committees for the Fifty-ninth Annual Session of the State Medical Association, which will be held in Austin in 1925, were announced.

The Texas Surgical Society met at Fort Worth, April 14-15, at which time the following program was rendered: "Carcinoma of the Cervix," Dr. C. C. Cade, San Antonio; "The Treatment of Fractures of the Mandible," with lantern slide illustrations, Dr. H. L. D. Kirkham, Houston; "Cartilaginous Tumors of Bone, Benign and Malignant," with lantern slide illustration, Dr. Violet H. Keiller, Galveston; "Concretions in the Appendix," Dr. H. M. Doolittle, Dallas; "Lipomata of the Sigmoid," Dr. John T. Moore, Houston; "Intestinal Obstruction," Dr. Chas. W. Flynn, Dallas; "Mobile Ascending Colon," Dr. K. H. Aynesworth, Waco; "Pyelitis from Surgical Standpoint," Dr. F. C. Beall, Fort Worth; "Pyelonephritis in Congenital Atrophic Kidney," Dr. A. I. Folsom, Dallas; "Reconstruction of the Female Urethra," Dr. E. W. Bertner, Houston; "Surgical Treatment of Gonorrheal Vesiculitis," Dr. J. M. Venable, San Antonio; "Supphrenic Abscess, with Report of Case," Dr. M. E. Lott, Dallas.

Second District Medical Society met at Sweetwater, April 15, at which time the following program was rendered: Invocation by Reverend B. B. Hester, Sweetwater; Welcome Address, Mayor of Sweetwater; Response, Dr. P. C. Coleman, Councilor, Colorado; "Diagnosis and Treatment of Colitis," Dr. F. E. Hudson, Stamford; "Some Things We Ought to Know About the Fundus Oculi," Dr. C. B. Leggett, Abilene; "The Licensed Physician, The Public, and the Various Cults and Quacks," Dr. R. I. Grimes, Merkel; "The Surgical Treatment of Solitary Tumors of the Peripheral Nerves," Dr. W. O. Ott, Fort Worth; "Better Prenatal Care, Better Obstetrics," Dr. L. J. Pickard; "Carcinoma of the Cervix," Dr. T. S. Edwards, Knox City; "Nephrectomy, a Report of Two Cases, Somewhat Unusual, Requiring the Removal of a Kidney," Dr. G. T. Hall, Big Spring; "Amebiasis, with Special Reference to Appendicostomy," Dr. J. M. Holt, Abilene.

Northwest Texas District Medical Society met at Cisco, April 8-9. Approximately 150 doctors registered during the two days session.

The following scientific program was rendered: "Intestinal Obstruction," Dr. C. W. Flynn, Dallas; "Inguinal Hernia," Dr. H. R. Dudgeon, Waco; "Prevention of Recurrences Following Operation for Hernia," Dr. L. F. Watson, Chicago; "Classification of Goiter," Dr. G. D. Mahon, Dallas; "Diagnosis and Surgical Treatment of Goiter," with lantern slide illustration, Dr. E. O. Rushing, Dallas; "Infections of the Urinary Tract," with lantern slide illustration, Dr. F. C. Beall, Fort Worth; "Kidney and Ureteral Calculi," with lantern slide illustration, Dr. Q. B. Lee, Wichita Falls; "Summary of Operative Results on Tumors of Peripheral Nerves," with case reports, Dr. W. O. Ott, Fort Worth; "Comments on the Present Status of Gallbladder Surgery," Dr. Bacon Saunder, Fort Worth; *X*-Ray and Radium in the Treatment of Cancer," Dr. M. H. Glover, Wichita Falls; "Present Day Status of the Treatment of Carcinoma of the Cervix," Dr. Chas H. Harris, Fort Worth; "Anatomy of the Female Pelvic Floor, Relative to Laceration and Repair," Dr. W. W. Looney, Dallas; "Intracranial Hemorrhage in the New-Born," Dr. W. L. Allison, Fort Worth; "Repair of the Perineum," Dr. C. W. Hannah, Dallas; "Pre-Natal Care," Dr. J. W. Powers, Wichita Falls; "The Management of Obstetrics in the Country," Dr. W. P. Farrington, Munday; "Modern Use of the Forceps in Obstetrics," Dr. G. V. Morton, Fort Worth; "Meddlesome Obstetrics," Dr. T. H. Parmley, Electra; "Medical Expert Evidence," Dr. F. S. White, Wichita Falls; "Treatment of Acute Glomerulonephritis," Dr. W. S. Horn, Fort Worth; "A Consideration of Oral Infection," Dr. A. W. Hiller, Fort Worth; "Headache," Dr. O. B. Kiel, Wichita Falls; "Some Peculiarities of Diseases in Children," Dr. L. J. Pickard, Abilene; "Malnutrition in Infant," Dr. S. C. Richardson, Eastland; "Report of Skin Disease," Dr. Sidney Wilson, Fort Worth; "The Importance of Diagnosis," Dr. R. A. Duncan, Graham.

DEATHS

Dr. C. P. Brewer of Fort Worth, died of pneumonia, at his home, April 12, 1924, following a brief illness.

Dr. Brewer was born at Harrisburg, Virginia, December 8, 1856, removing with his family to Alexandria, Kentucky, in 1861. From this place the family moved to Chattanooga, Tennessee, in 1874. His education was such as could be had by intermittent schooling and an insatiable appetite for reading. He entered the ministry of the Methodist Episcopal

DR. C. P. BREWER.

Church, South, in 1879, joining the St. Louis Conference, for several years thereafter following the life of an evangelist and circuit rider. In 1892, he was transferred to the Indian Territory Conference, for missionary work among the Cherokee Indians. His work among the Indians was a distinct success. He became very popular with the Indians, and was "adopted" by one of the tribes. One of his children was born here, and the pride of the Indians in the "white papoose," was notable.

In 1897, Dr. Brewer relinquished the ministry because of a condition of the throat which precluded public speaking, removing to Fort Worth, Texas, where he secured employment with an insurance company. His work was of such character that he could devote himself to other enterprises, and he

took up the study of medicine in the Fort Worth Medical College, from which institution he graduated in 1902. He at once abandoned other business connections and devoted himself to the practice of general medicine. He became local referee and physician for the Western Union Telegraph and Telephone Company, and for the last three years of his life he had served as physician for the Home for Aged Masons, at Arlington. During the war he served on the local draft board.

Dr. Brewer was married to Miss Alice Dalton of Allenville, Ky., in 1883. To this union were born four children, two of whom are living, Chas. T., of Roanoke, Texas, and a daughter who resides in Virginia. His first wife died in 1889, and he was married to Miss Blanche Wensell of Lamont, Mo., in 1893, to which union were born four children, Reginald H., Paul V., Blanche E. and W. Francis, all of whom, together with his wife, survive him and reside in Fort Worth.

Dr. Brewer's connection with organized medicine has been coincident with his practice of medicine. For several years he edited *The Texas Courier of Medicine*, a medical journal published in Fort Worth. He became convinced that a publication of this character could not survive except upon unethical advertising, and it was abandoned. Soon after the demise of this publication, he became Book Note Editor of the JOURNAL, rendering valuable service in that capacity. In this work he took great pride, and his constant complaint was that not enough room was given to his department. His ambition was to be granted space in which to discuss scientifically and philosophically, the principal books coming to him for review, rather than merely giving expression to his views as to the desirability of certain books, with perhaps a brief description of their scope and contents. He was a philosopher by nature and delighted to commit his thoughts to permanent form. His passing will be deplored by his many friends, and his place on the JOURNAL staff will be difficult to fill.

Dr. W. C. Cullom of Mesquite, died at his home, April 23, 1924.

Dr. Cullom was born in Nashville, Tennessee, in 1843, where he received his academic education. He graduated in medicine from the University of Nashville, in 1872, and the following six years were spent in practice in Tennessee. He came to Texas in 1878, and had been in active practice at Mesquite and surrounding country, until about ten years ago, when he retired. For the past twenty-five years he served as treasurer of the Masonic lodge at Mesquite, which organization took charge of his funeral services at the grave. He is survived by his wife, two sons and five daughters.

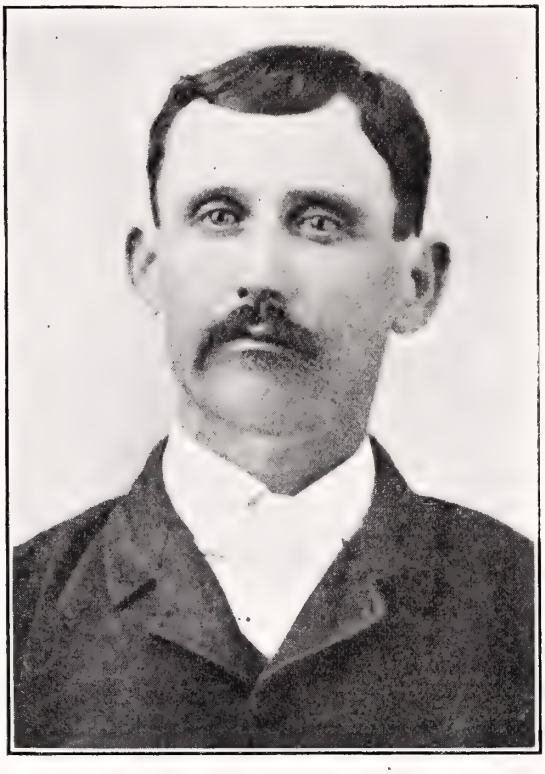
Dr. James Otis Holton of Prairie Hill, Texas, was shot to death April 2, 1924.

Dr. Holton was born near Franklin, Texas, July 17, 1876. He moved with his parents to McCulloch County, Texas, in 1883, and secured his early education in Camp San Saba school, graduating from high school in 1889. He began the study of medicine when seventeen years of age, at the Memphis College Hospital, Memphis, Tennessee, receiving his degree from the Fort Worth Medical College in 1900. He began practicing at Prairie Hill, where he continued to practice until his death.

Dr. Holton was married to Miss Pearl Higgins of Wooten Wells, Texas, November 3, 1901. His wife, two sons and one daughter, survive him. He had, until one year prior to his death, been a member of his county medical society, and ranked high in the profession of the community in which he had lived and practiced for so long.

Dr. A. E. Cearnal of Indian Creek, died at his home, March 24, aged 72.

Dr. Cearnal received his early education at Bryan, Texas, and graduated in medicine from the Alabama Medical College, Mobile, Alabama, in 1874. He practiced at Caldwell, Texas, for a number of years, going from there to Indian Creek, where he continued to practice until his death. He was a Mason and a member of the Baptist Church. He had been a member of the Brown County Medical Society for a number of years, and resolutions showing the esteem in which he was held by his fellow practitioners, were adopted by that organization.



DR. A. E. CEARNAL

Dr. Harry L. Leap of San Antonio, Texas, died at his home, April 26, following a brief illness.

Dr. Leap was born in Madison, Indiana, July 7, 1871, where he lived until 1885, removing to Texas during that year, and entering the service of the Southern Pacific Railway. For seventeen years he served this road as locomotive engineer, studying medicine in the meantime. He graduated in medicine from the University of Texas, at Galveston, in 1910. He immediately entered general practice in San Antonio, where he resided continuously until the time of his death. He was married to Miss Bernice Kandle of San Antonio, in 1911. His wife and small son and daughter survive him.

Dr. Leap was a man of unique attainments. He prospered in the practice of medicine and excelled in civic enterprises. He was popular with his brother physicians, and was considered by them as competent in his chosen profession. Of the many honors that came to him by virtue of his attainments, his greatest pride resided in the orthopedic clinic which he conducted at the Santa Rosa Infirmary for children whose parents could not afford to pay the price of competent corrective treatment. He was a Mason

of high degree, and at the time of his death was Master of one of the Masonic lodges of his city. He was an Elk and a Rotarian, contributing largely of his time to these two active organizations. He was a director of the Chamber of Commerce, and had for two years been president of the Fiesta de San Jacinto, the typical and comprehensive civic organization of the city. The Battle of Flowers and the week of festivities conducted by this organization, under his direction, was being brought to its close at the time he was stricken with his fatal illness. His connection with organized medicine had been intimate. He was at the time of his death chairman of the Committee on Exhibits for the Annual Session of the State Medical Association, about to be held in San Antonio. He had twice been president of one

DR. HARRY L. LEAP.

of the study clubs of the Bexar County Medical Society. It was said of him by a friend that he "Did not sit in the seat of the scorner, nor hurl the cynic's ban; he lived in a house by the side of the road and was a friend to man."

Dr. J. J. Dial of Sulphur Springs, died of apoplexy at his home, April 6, 1924, following ten days' illness.

Dr. Dial was born in Shelby County, Texas, in 1853. He graduated from the Louisville Medical College in 1876, and began practicing in Hopkins county. He moved to Sulphur Springs in 1881, where he had since practiced, with the exception of eight years, during which he practiced at Muskogee, Oklahoma.

Dr. Dial was appointed a member of the first Regular Medical Examining Board in Texas, by Governor Campbell, and before that was for eight years chairman of the District Medical Examining Board of the Eighth Judicial District. He held the chair of Surgery in the first medical school in Dallas, now Baylor University College of Medicine. He was a member of the 39th District Medical Advisory Board of Oklahoma, during the World War, and was honorably discharged at the close of the war. He kept abreast of the medical world, taking post-graduate work in the leading clinics of the United States at least every two years during his practice.

Dr. Dial had been an active member of his county medical society for many years, and at the time of

DR. J. J. DIAL.

his death was president of that organization. He is survived by his wife and three children, O. L. Dial of Sherman, J. A. Dial of Sulphur Springs and Mrs. A. L. Williams of Greenville.

Dr. J. W. Vermillion of Sinton, died at his home, following an operation, November 26, 1923.

Dr. Vermillion was born in Pulaski County, Virginia, February 29, 1852, and received his early education in the common schools of that county. He graduated in medicine from the University of Alabama, Tuscaloosa, Alabama, in 1883. He practiced medicine in McDade, Silverton and San Benito, Texas, prior to locating in Sinton, at which latter place he had been practicing for the past twelve years. He was an active member of his county medical society. He is survived by two sons, L. H. Vermillion of Alexandria, Virginia, and C. S. Vermillion of Sinton, and by four daughters, Mrs. J. R. North of Woodard, Oklahoma, Mrs. F. D. Mason of Texhoma, Oklahoma, Mrs. M. B. Robertson and Mrs. G. Winford, both of Paducah, Texas.

Zonite.—Zonite is advertised as a new and wonderful discovery based on the "Carrel-Dakin" solution. The propaganda is, in effect, a capitalization of the work of Carrel-Dakin and others. Chemically Zonite, after dilution with an equal quantity of water, is claimed to be essentially the same as Surgical Solution of Chlorinated Soda (Carrel-Dakin) of New and Nonofficial Remedies. Zonite has been exploited to both physicians and the public.—*Jour. A. M. A.*, April 7, 1923.

MEMBERSHIP
STATE MEDICAL ASSOCIATION OF TEXAS
June 1924

No. 1. El Paso District, composed of the following counties: Brewster, Culberson, El Paso, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Ward and Winkler.

No. 2. Big Spring District, embracing the following counties: Andrews, Borden, Cochran, Crane, Dawson, Dickens, Ector, Fisher, Gaines, Garza, Glasscock, Howard, Hockley, Jones, Kent, King, Lynn, Martin, Midland, Mitchell, Nolan, Scurry, Stonewall, Taylor, Terry, Upton and Yoakum.

No. 3. Panhandle District, embracing the following counties: Armstrong, Bailey, Briscoe, Castro, Carson, Cottle, Childress, Collingsworth, Crosby, Deaf Smith, Dallam, Donley, Floyd, Gray, Hale, Hall, Hardeman, Hemphill, Hutchinson, Hansford, Hartley, Lamb, Lipscomb, Lubbock, Motley, Moore, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher and Wheeler.

No. 4. San Angelo District, embracing the following counties: Brown, Coke, Concho, Crockett, Coleman, Irion, Kimble, Lampasas, Menard, Mills, McCulloch, Runnels, Schleicher, Sterling, Sutton and Tom Green.

No. 5. San Antonio District, embracing the following counties: Atascosa, Bandera, Bexar, Comal, Dimmit, Edwards, Frio, Guadalupe, Gillespie, Gonzales, Karnes, Kendall, Kerr, Kinney, La Salle, Maverick, Medina, Uvalde, Val Verde, Wilson and Zavalla.

No. 6. Corpus Christi District, embracing the following counties: Aransas, Bee, Brooks, Cameron, Dunn, Duval, Encinal, Hidalgo, Jim Wells, Kleberg, Live Oak, McMullen, Nueces, Refugio, San Patricio, Starr, Webb, Willacy and Zapata.

No. 7. Austin District, embracing the following counties: Bastrop, Blanco, Burnet, Caldwell, Hays, Lee, Llano, Mason, San Saba, Travis and Williamson.

No. 8. DeWitt District, embracing the following counties: Calhoun, Colorado, DeWitt, Fayette, Goliad, Jackson, Lavaca, Matagorda, Victoria and Wharton.

No. 9. Southern District, embracing the following counties: Austin, Brazoria, Burleson, Fort Bend, Galveston, Grimes, Harris, Madison, Montgomery, Polk, San Jacinto, Waller, Walker and Washington.

No. 10. Southeastern District, embracing the following counties: Angelina, Chambers, Hardin, Jefferson, Jasper, Liberty, Nacogdoches, Newton, Orange, Sabine, San Augustine, Shelby and Tyler.

No. 11. Eastern District, embracing the following counties: Anderson, Cherokee, Freestone, Henderson, Houston, Leon, Panola, Rusk, Smith and Trinity.

No. 12. Central District, embracing the following counties: Bell, Bosque, Brazos, Comanche, Coryell, Erath, Falls, Hamilton, Hill, Hood, Johnson, Limestone, Milam, McLennan, Navarro, Robertson and Somervell.

No. 13. Northwestern District, embracing the following counties: Archer, Baylor, Callahan, Clay, Eastland, Foard, Haskell, Jack, Knox, Palo Pinto, Parker, Shackelford, Stephens, Throckmorton, Wichita, Wilbarger and Young.

No. 14. Northern District, embracing the following counties: Collin, Cook, Dallas, Delta, Denton, Ellis, Fannin, Grayson, Hopkins, Hunt, Kaufman, Lamar, Montague, Rains, Rockwall, Tarrant, Van Zandt and Wise.

No. 15. Northeastern District, embracing the following counties: Bowie, Camp, Cass, Franklin, Gregg, Harrison, Marion, Morris, Red River, Titus, Upshur and Wood.

FIRST OR EL PASO DISTRICT.

Dr. R. B. Homan, El Paso, Councilor.

EL PASO COUNTY MEDICAL SOCIETY.

Anderson, W. H., El Paso.
Arguelles, F. L., El Paso.
Armistead, Ernest K., El Paso.
Barrett, Frank O. (Sec.), El Paso.
Bishop, Ida, El Paso.
Branch, W. M., El Paso.
*Britton, J. M., El Paso.
Britton, W. W., El Paso.
Brown, C. P., El Paso.
Brown, J. W., El Paso.
*Brown, W. L., El Paso.
Brunner, George, El Paso.
Byrd, E. L., Clint.
Calnan, G. B., El Paso.
Carter, G. B., El Paso.
Casellas, P. R., El Paso.
*Cathcart, John W., El Paso.
*Crossley, S. W., Ysleta.
Crouse, Hugh, El Paso.
Cummins, Erwin J., El Paso.
Davis, William J., El Paso.
Duckett, W. F., El Paso.
Duncan, E. A., El Paso.
Egbert, Orville, El Paso.
Frazin, N. D., Rosita, Coah., Mex.
Gallagher, Paul, El Paso.
Galloway, B. E., Augascalientes, Mexico.
*Gambrell, J. H., El Paso.
*Garrett, F. D., El Paso.
Gray, J. B., El Paso.
Haffner, S., El Paso.
Hardy, John A., El Paso.
Hendricks, Chas. M., El Paso.
Huffaker, D. H., El Paso.
*Homan, Robert B., El Paso.
Hunter, J. R., El Paso.
Irvin, E. H., El Paso.
Jamieson, W. R., El Paso.
Johnson, W. E., El Paso.
*Jones, W. T., Fort Davis.
King, S. F., El Paso.
Larrabee, W. S., El Paso.
*Laws James W., El Paso.
Leff, M. I., El Paso.
Leigh, Harry, El Paso.
Liddell, T. C., El Paso.
Long, A. D., El Paso.
Love, J. D., El Paso.
Lynch, K. D., El Paso.
Mason, C. H., El Paso.
McCamant, T. J., El Paso.
McNeil, Irving, El Paso.
*Miller, Felix P., El Paso.
Molloy, M. S., El Paso.
Moore, W. C., Presidio.
Newman, S. H., El Paso.
Olvera, Zuniga W., El Paso.
Outlaw, P. R., El Paso.
Pickett, J. A., El Paso.
Prentiss, E. C., El Paso.
Price, E. D., El Paso.
Ramey, R. L., El Paso.
Randall, Brown W., El Paso.
Rawlings, J. A., El Paso.
Rheinheimer, E. W., El Paso.
*Richmond, J. M., El Paso.
Riley, J. D., El Paso.
Rodarte, D., El Paso.
Rogers, E. B., El Paso.
Rogers, Vernon S., El Paso.
Rogers, Will P., El Paso.
*Safford, Harry T., El Paso.
*Schuster, Frank P., El Paso.
Schuster, Stephen A., El Paso.
Sharp, W. S., El Paso.
Smith, Carl Lee, El Paso.
Stark, H. H., El Paso.
Stevens, B. F., El Paso.
Stevenson, Herbert, El Paso.
Strong, E. D., El Paso.
Swope, S. D., El Paso.
*Tappan, John W., El Paso.
Terrell, Scurry L., El Paso.
Thomas, G. N., El Paso.
Thompson, Ernest B., El Paso.
Tucker, G. E., Madera, Chih., Mex.
Turner, George, El Paso.
Turner, S. T., El Paso.
Vance, James, El Paso.
Varner, H. H., El Paso.
Villareal, Andres, El Paso.
Von Almen, S. G., El Paso.
*Waite, Willis W. (Pres.), El Paso.
Weish, M., Karnes City.
Werley, G., El Paso.
White, A. H., Shafter.
White, Hugh S., El Paso.
White, Wm., El Paso.
Wilson, R. A., El Paso.
Witherspoon, Louis G., El Paso.
Worthington, G. W., Marathon.
Wright, J. E., Alpine.

REEVES-WARD-PECOS COUNTY MEDICAL SOCIETY.

Black, W. D. (Sec.), Barstow.
Bryan, O. J., Pecos.
Camp, Jim (Pres.), Pecos.
Curtis, W. K., Midland.
Lusk, H. N., Pecos.

SECOND OR BIG SPRING DISTRICT.

Dr. P. C., Coleman, Colorado, Councilor.

ECTOR-MIDLAND-MARTIN-HOWARD COUNTY MEDICAL SOCIETY.

Clark, H. T., Garden City.
*Collins, T. M. (Sec.), Big Spring.
*Davis, R. L., Big Spring.
Gilliam, H. A., Lamesa.
*Hall, G T., Big Spring.
Hurt, John H., Big Spring.
Liles, B B., Coahoma.
Parmley, L. E., Ackerly.
Thomas, Jno. B., Midland.
True, G. S., Big Spring.

FISHER-STONEWALL COUNTY MEDICAL SOCIETY.

Allen, R. R., Roby.
Allen, W. L., Rotan.
Barb, T. J., Roby.
Callan, W. W. (Sec.), Rotan.
Hambright, J. G. (Pres.), Roby.
Reaves, B. F., Rotan.
*Sartor, E. R., Rotan.

JONES COUNTY MEDICAL SOCIETY.

Bickley, N. H., Stamford.
Blackwell, R. J., Hawley.
Bowyer, O. McD., Anson.
Brown, I. Z., Lueders.
Bunkley, E. P., Stamford.
Bynum, J. T., Hamlin.
Hudson, F. E., Stamford
Jones, A. McK. (Sec.), Anson.
Lowder, E. L., Lueders.
McCrary, L. P., Hamlin.
McCreight, W. J., Anson.
McReynolds, A. D., Stamford.
Magee, L. S., Hamlin.
*Montgomery, J. E., Stamford.
Shaw, E. L., Los Angeles.
Smith, N. J., Hamlin.
Southard, D., Stamford.
*Stephens, D. L., Anson.

*The asterisk (*) indicates registration at San Antonio Session.

Taylor, J. F. (Pres.), Hamlin.
White, D., Hamlin.
Williams, D,, Anson.
Wylie, D. C., Peacock.

MITCHELL COUNTY MEDICAL SOCIETY.

Barber, T. H., Colorado.
*Coleman, P. C., Colorado.
Hester, W. L., Loraine.
Martin, T. A. (Pres.), Loraine.
Ratliff, T J. (Sec), Colorado.
*Root, C. L., Colorado.

NOLAN COUNTY MEDICAL SOCIETY.

Chapman, A. A. Sweetwater.
Dudgeon, L. O. Sweetwater.
Fain, G. Burton (Sec.), Blackwell.
Fortner, A. H.. Sweetwater.
*Leach, S. N., Sweetwater.
Lindley, C. D., Sweetwater.
Monk, C. L., Sweetwater.
Pool, W. F., Sweetwater.
Risinger, M. M, Roscoe
Rosebrough, C. A., Sweetwater.
Scott, H. C. (Pres.), Sweetwater.
Thompson, Burch, Blackwell.
Young, J. W., Roscoe.

SCURRY-DICKENS-KENT COUNTY MEDICAL SOCIETY.

Bannister, J. M., Snyder.
Johnson, W. R., Snyder.
*Leslie, A. C., Snyder.
Monger, N. D (Sec.), Snyder.
Trigg, L. E. Snyder.
Ward, W. H., Hermleigh.

TAYLOR COUNTY MEDICAL SOCIETY.

Alexander, J. M., Abilene.
Alexander, S. M., Abilene.
Armstrong, M., Merkel.
Bailey, J. H., Clyde.
Bass, T. B., Abilene.
Ball, J. H., Abilene.
Barnett, W. H., Abilene.
Boon, J. T., Bradshaw.
*Campbell, M. E. (Sec.), Abilene.
*Cash, W. A. V., Abilene.
Clark, J. Frank, Abilene.
Cooper, Stewart (Pres.), Abilene.
Daly, Jos. M., Abilene.
*Dowda, S. T., Abilene.
Embry, Ruby K., Abilene.
*Estes, J. M., Abilene.
Glenn, R. P., Abilene.
Griffith, J. K., Lawn.
Grimes, R. I., Merkel.
Hedrick, T. Wade, Abilene.
Hollis, Scott W., Abilene.
*Holt, Jno. M., Abilene.
Leggett, C. B., Abilene.
Lockett, B. L., Abilene.
Magee, J. D., Abilene.
Mathews, W. J., Abilene.
Pickard, L. J., Abilene.
Pope, A. J., Abilene.
Rhodes, B. F., Abilene.
Shytles, W. G., Abilene.
Swan, A. H., Abilene.
Warnick, J. H., Abilene.
Watkins, G. H., Trent.
Webster, R. A., Clyde.
Williams, Chas. F., Abilene.

THIRD OR PANHANDLE DISTRICT.

Dr. R. S. Killough, Amarillo, Councilor.

CHILDRESS-COLLINGSWORTH-DONLEY-HALL COUNTY MEDICAL SOCIETY.

Ballew, J. M., Memphis.
Bryan, F. R., Childress.
Cariker, F. H., Childress.
Cross, D. D., Wellington.
Fox, Grover C., Tell.
Garner, J. E., Turkey.
Gooch, J. W., Shamrock.
Gilmore, H., Turkey.
Harper, J. W., Wellington.
Harrell, J. F., Kirkland.
Hennen, J. C., Memphis.
*Hyder, D. C., Memphis.
Jenkins, O. L., Clarendon.
Jenkins, B. L., Clarendon.
Jernigan, J. A., Childress.
Jones, E. W., Wellington.
*Michie, J. D., Childress.
Miller, W. S., Estelline.
Moss, E. W., Wellington.
Odom, J. A. (Sec.), Memphis.
Ozier, J. B., Hedley.
Schoolfield, H. F., Memphis.
Snyder, J. W. Childress.
Stidham, C. Z., Memphis.
Street, S. A., Wellington.
*Vardy, P. L., Estelline.
*Wardlaw, W. N. (Pres.), Childress.
*Wilder, H. L., Clarendon.
Wilson, C. F., Memphis.
*Wilson, W., Memphis.

HALE-FLOYD-BRISCOE-SWISHER COUNTY MEDICAL SOCIETY.

Anderson, J. C., Plainview.
Andrews, V., Floydada.
Breaker, J. J., Silverton.
Cantrell, C. A., Plainview.
Crawford, J. Ed., Tulia.
Dye, E. Lee (Sec.), Plainview.
Freeman, W. H.. Sentinel, Okla.
*Gidney, C. C., Plainview.
Greer, N. E., Lockney.
Guest, J. L., Plainview.
*Hays, A. R.. Baird.
Henry, S. M., Lockney.
Houghton, W. M., Floydada.
Jones, D. P., Plainview.
McClendon, E. F., Plainview.
Nichols, E. O., Plainview.
Owens, J. F., Plainview.
Smith, G. V., Floydada.
Smith, L. V. (Pres.), Floydada.
Underwood, S. J., Hale Center.
Wayland, J. H., Plainview.
Wayland, L. C., Plainview.

HARDEMAN-COTTLE COUNTY MEDICAL SOCIETY.

Clark, Hines, Crowell.
Conley, J. W. (Pres.). Quanah.
Dillard, B. A., Chillicothe.
Frizzell, T. D., Quanah.
Hamilton, R. L., Matador.
*Hanna, J. J. (Sec.), Quanah.
Hill, J. M., Crowell.
*Horton, J. T., Quanah
Hughes, J. F, Roaring Springs
Johnson, G H.. Quanah.
Jones. C. B., Quanah.
Kincaid, R. L., Crowell.
Lowery, Thos. A., Chillicothe.
McCullough, J. T., Quanah.
McDaniel, R. R., Quanah.
McGowan, E. E., Paducah.
McGowan, W. J., Paducah.
Radford, G. W., Quanah.
Stone, Frank, Paducah.
Terry, S. D., Goodlett.

LUBBOCK-CROSBY COUNTY MEDICAL SOCIETY.

Adams, S. H., Slaton.
Anderson, W. H., Littlefield.
Bates, Thos. G., Lubbock.
*Baugh, Wm. L., Lubbock.
*Castleberry, Gerlie, Lubbock
Cravens, W. E., Lubbock.
Fulbright, Wm., Ralls.
Green, J. A., Crosbyton.
Hall, R. J., Lubbock.
Hutchinson, Jas T. (Pres.), Lubbock.
Krueger, Julius T. (Sec.), Lubbock.
Lattimore, Jno. P., Lubbock.
Miller, Sallie W., Slaton.
Miller, H. F., Slaton.
Moorehead, J. D., Meadow.
Overton, M. C., Lubbock.
Starnes, Mert H., Lubbock.
Stewart, A. T., Lubbock.
Stewart, S. H., Lubbock.
Surman, A. C., Post.
Townes, Chas. B., Tahoka.
Tucker, Walter A, Slaton.
Wagner, Chas. J., Lubbock.
*Williams, D. C., Post.

POTTER COUNTY MEDICAL SOCIETY.

Askew, W. L., Amarillo.
Bennett, R. M., Amarillo.
Biggers, M. A., Canyon.
Brunow, V. E., Pampa.
Caldwell, A J., Amarillo.
Carroll, W. A., Claude.
Cole, Archie, Pampa.
Crume, J. J., Amarillo.
Donnell, C. E., Canyon.
Flamm, W. H., Amarillo.
Foster, Robt., Groom.
Fuller, M. L., Amarillo.
Gabbert, Wm. F., Hereford.
*Gist, R. D., Amarillo.
Hicks, J. W., Hereford.
Johnston, E. A., Amarillo.
Jordan, J. D., Amarillo.
Kelly, J. H., Miami.
Keys, Richard (Sec), Amarillo.
*Killough, R. S., Amarillo.
Latson, H. H., Amarillo.
LeGrand, G. F., Hereford.
Lumpkin, A. F., Amarillo.
McMeans, R. L., Amarillo.
Montgomery, W. C., McLean.
Patton, L. K., Amarillo.
Petty, L. E., Panhandle
Puckett, B. M., Amarillo.
Randall, C. F., Amarillo.
Rasco, I., Amarillo.
Roach, D., Amarillo.
*Stewart, D. M., Canyon
Thomas, Geo. T., Amarillo.
Van Swearengen, W, Amarillo.
*Vineyard, S. P., Amarillo.
Vineyard, G. T. (Pres.), Amarillo.
Vineyard, R. L., Amarillo.
Winsett, A. E., Amarillo.
Wrather, J. R., Amarillo.
Zeigler, B. A., Shamrock.

FOURTH OR SAN ANGELO DISTRICT.

Dr. Joe E. Dildy, Brownwood, Councilor.

BROWN COUNTY MEDICAL SOCIETY.

Allen, Homer B., Brownwood.
Anderson, A. L., Brownwood.
Anderson, W. B., Brownwood.
Ashcraft. E. J., Bangs.
Bailey, T. B., Brownwood.
Brown, M. L., Brownwood.
Brooking, J E., Goldthwaite.
Bullard, C. C., Brownwood.
*Campbell, J. M., Brownwood.
*Daugherty, Jewel, Brownwood.
*Dildy, Joe E., Brownwood.
*Fowler, B. A., Brownwood.
Herrington, J. L., Mullin.
*Horn, J. M., Brownwood.
*Howell, R. L. (Pres.), Brownwood.
Jones, R. H., Mullin.
Lobstein, H. L., Brownwood.
Locker, H. L.. Brownwood.
Mayo, O N., Brownwood
Paige, W. H., Brownwood.
*Pier, T. J., Brownwood.
*Shelton, Ben M. (Sec.), Brownwood.
Snyder, Ned, Brownwood.
Taylor, A. L., Brownwood.
Tottenham, J. W., Brownwood.

COLEMAN COUNTY MEDICAL SOCIETY.

Allison, L. P., Coleman.
Aston, S. N., Coleman.
Bailey, R., Coleman.
Beaumont, G. B., Coleman.
Cochran, R. H., Coleman.
Hays, T. M., Santa Anna.
Holland, W. F., Santa Anna.
Jennings, W. L., Coleman.
Lovelady, R. R., Santa Anna.
*Manes, O. B., San Antonio.
Mitchell, H. H., Valera.
Nichols, John M., Coleman.
Pope, J. G. (Pres.), Coleman.
*Sealy, T. R., Santa Anna.
Smith, C. E., Talpa.
Tyson, Jason (Sec.), Santa Anna.
Tyson, John, Cross Plains.
Walker, M. G., Coleman.

LAMPASAS COUNTY MEDICAL SOCIETY.

Beaumont, E. C., San Saba.
Biggs, W. D., Lometa.
Rivins, L. L., Copperas Cove.
Black, D. W., Lampasas.
Francis, W D. (Pres.), Lampasas.
Gaddy, H. R., Lampasas.
Hicks, J. T., Moline.
Kirby, O. A., Lometa.
Landrum, M. M., Lampasas.
Lowe, W. M., Lometa.
Pearce, Boyd F., Izoro.
Taylor, H. H., San Saba.
Townsen, Joe B., Lampasas.
Townsen, J. Garrett (Sec.), Lampasas.

Whittenberg, W. A., Lometa.
Willerson, J. E., Lampasas.

MENARD-KIMBLE COUNTY MEDICAL SOCIETY.

Burt, Fred (Pres.), Junction.
France, J. W., London.
Fussell, J. W., London.
*Gray, Helen E., Junction.
Leggett, J. A. (Sec.), Menard

McCULLOCH COUNTY MEDICAL SOCIETY.

Anderson, J. S. (Sec.), Brady.
*Baze, P. A., Mason.
Beakley, B. B., Melvin.
*Beach, W. W., Mason.
George, Robert, Fredonia.
Granville, J. B., Brady
Hutchinson, J. L., Pontotoc.
Jackson, O. C., Voca.
*Land, Wm. (Pres.), Lohn.
*Matlock, J. W., Rochelle.
*McCall, J. G., Brady.
*Powell, J. E., Rockwood
Stone, J. B., Pearvalley.

RUNNELS COUNTY MEDICAL SOCIETY.

Blasdell, J. W., Ballinger.
Dixon, J. W., Winters.
*Halley, W. B. (Pres), Ballinger.
*Jennings, T. V., Winters.
Lasater, O. R., Ballinger
Love, A. S., Ballinger.
Middleton, E. R., Winters.
Rives, C T. (Sec.), Winters
Shiller, J. J., Rowena.

TOM GREEN COUNTY MEDICAL SOCIETY.

Batts, E. L., San Angelo
Chaffin, J. B., San Angelo.
Chambers, W. F., (Sec.), San Angelo.
Cobb, W. W., San Angelo.
*Cornick, Boyd, San Angelo.
Deal, E. O., Mertzon.
*DeLong, A. C., San Angelo.
Eaton, C. E., Robert Lee.
*Fowler, D. D., Paint Rock.
Herndon, J. H., Miles.
Hess, D. L., San Angelo.
Hinde, H. K., San Angelo
*Hixon, J. S., San Angelo.
Horney, Harlan, San Angelo.
Keyes, C. T., San Angelo.
*Koerth, C. J., Sanatorium.
Lewis, G. L., San Angelo.
McAnulty, J. P., San Angelo.
*McKnight, J. B., Sanatorium.
Mays, C. E., San Angelo
Nibling. G. W., San Angelo.
Rush, H. P., San Angelo.
*Shotts, T. D., San Angelo
Trichel, J. J, San Angelo.
Turney, F. K., San Angelo.
Turney, M. L, Alpine
Utterback, A. P., San Angelo
*Wardlaw, H. R. (Pres.), San Angelo.
Williams, J. M., San Angelo.
Womack, C. T., San Angelo.
Yates, G. M., San Angelo

FIFTH OR SAN ANTONIO DISTRICT.

Dr. C. S. Venable, San Antonio, Councilor.

ATASCOSA COUNTY MEDICAL SOCIETY.

Atkinson, Roger, Pleasanton.
Davis, W. A., Atlanta, Ga.
*Duncan, John W. (Sec.), Jourdanton.
Gipson, Wm. M., Lytle.
Guynes, John T., Jourdanton.
*Irwin, Clyde M., Charlotte.
*Luse, S. L., North Pleasanton.
*Mann, Robert E., North Pleasanton.
*Shotts, Charley C., Poteet.
*Touchstone, Robert B., Lytle.
*Whitett, Mrs. Mary J., Anchorage.

BEXAR COUNTY MEDICAL SOCIETY.

*Adams, Eldridge, San Antonio.
*Adams, R. Stuart, (Sec.), San Antonio.
*Allin, F. A., San Antonio.
*Altheide, C. H., San Antonio.
*Anderson, J. L., San Antonio.
Applewhite, Scott C., San Antonio.
*Arendt, E. J., San Antonio.
*Atkinson, D. T., San Antonio.
*Baird, O. C., San Antonio.
*Baker, C. R., San Antonio.
*Barron, W. M., San Antonio.
*Bassett, W. M., San Antonio.
*Beal, A. R., San Antonio.
*Beakley, S. S., San Antonio.
*Beck, Lewis K., San Antonio.
*Beckmeyer, J. F., San Antonio.
*Bennett, W. R., San Antonio.
*Berchelmann, A., San Antonio.
*Berrey, D., San Antonio.
*Betts, C. E., San Antonio.
*Biggar, J. H., San Antonio.
*Bleim, Milton J., San Antonio.
*Boehs, Chas. J., San Antonio.
*Bowen, P. G., San Antonio.
*Bowen, R. E., San Antonio.
*Brassell, T. C., San Antonio.
Braunnagel, J., San Antonio.
*Breeding, A. L., San Antonio.
*Bronson, Arthur Scott, San Antonio.
*Brown, A. A., San Antonio.
Brustad, L. A., San Antonio.
*Burg, Edward M., San Antonio.
Burg, Sigmund, San Antonio.
*Burk, W. E., San Antonio.
*Burleson, J. H., San Antonio.
*Bush, H. M., San Antonio.
*Cade, C. C., San Antonio.
*Cade, W. H., San Antonio.
*Campbell, C. A. R., San Antonio.
*Cassity, Jack H., San Antonio.
*Cassity. J. C., San Antonio.
*Cayo, E. A., San Antonio.
*Cerna, David, San Antonio.
*Chatten, E. A., San Antonio.
*Clark, A. F., San Antonio.
Combe, Frederick J., San Antonio.
*Cook, Clara G., San Antonio.
*Cook, Paul, San Antonio.
*Cornick, Geo. B., San Antonio.
*Cotham, C. M., San Antonio.
*Crockett, R. H., San Antonio.
*Coyle, J. E., San Antonio.
*Cunningham, S. P. (Pres.), San Antonio.
*Cutter, Irving T., San Antonio.
*Davidson, A. M., San Antonio.
*Decker, C. M., San Antonio.
*DePew, E. V., San Antonio.
*Dinwiddie, R. L., San Antonio.
*Dorbandt, Thomas, San Antonio.
*Dreiss, A. M., San Antonio.
Duckworth, G. M., Cuero.
Dumas, E. D., San Antonio.
*Durant, Ira E., San Antonio.
Elmendorf, E. H., San Antonio.
*Ellis, Jno. W., San Antonio.
*Evans, E. O., San Antonio
*Frey, Conrad, Somerset.
*Felder, J. L., San Antonio.
*Forbes, M. A., San Antonio.
*Farmer, W. C., San Antonio.
*Glauner, Frederick E., San Antonio.
*Goeth, R. A., San Antonio.
*Goode, John W., San Antonio.
*Goodson, T. N., San Antonio.
*Goodwin, Roy T., San Antonio.
*Graves, Amos, San Antonio.
*Gray, E. H., San Antonio.
*Gwinn, G. E., San Antonio.
*Grimland, G. A., San Antonio.
*Haggard, F. N., San Antonio.
*Haley, J. F., San Antonio.
*Hamilton, W. S., San Antonio.
*Hanson, W. S., San Antonio.
*Hargis, W. H., San Antonio.
*Harper, Mary C., San Antonio.
Herff, Adolph, San Antonio
*Herff, F. P., San Antonio
*Herff, John B., San Antonio.
*Hicks, W. D., San Antonio.
*Hicks, F. M., San Antonio.
*Hill, H. Phil, Alamo Heights.
*Hill, Lucius D., San Antonio.
*Hirschfeld, Louis, San Antonio.
*Hull, A. O., San Antonio.
*Hull, Theo. Y., San Antonio.
*Jackson, Dudley, San Antonio.
*Jackson, L. B., San Antonio.
*Jackson, M. Beal, San Antonio.
*Jackson, Ralph S., San Antonio.
*Jewell, R. C., San Antonio.
*Johnson, Allen, San Antonio.
*Johnson, G. L., San Antonio.
*Johnson, H. McC., San Antonio.
*Judkins, O. H., San Antonio.
*Kahn, I. S., San Antonio.
*Kaliski, Sidney R., San Antonio.
*Kelley, Cole, San Antonio.
*Kenney, John W., San Antonio.
*Kenney, Nat M., San Antonio.
*King, W. A., San Antonio.
*Kitowski, C. B., San Antonio.
*Klieforth, F. H., San Antonio.
*Kingsley, B. F., San Antonio.
*Lankford, J. S., San Antonio.
Largen, Douglas, San Antonio.
Leap, Harry L., San Antonio.
*Lehman, C. Ferd, San Antonio.
*Lochte, Erwin R., San Antonio.
*Lowry, S. T., San Antonio.
*Luter, W. E., San Antonio.
*Martin, J. B., San Antonio.
*Manhoff, L. J., San Antonio.
*McCamish, Edw. W., San Antonio.
*McCorkle, R. G., San Antonio.
*McDaniel, Alfred C., San Antonio.
*McDaniel, A. S., San Antonio.
*McGlasson, I. L., San Antonio.
*McIntosh, J. A., San Antonio.
*McManus, W. F., San Antonio.
*Merrick, Edw. H., San Antonio.
*Milburn, Conn L., San Antonio.
*Miller, Emma T., San Antonio.
Miller, Jas. M., San Antonio.
*Miller, J. B., San Antonio.
*Moody, T. L., San Antonio.
*Moore, J. M., San Antonio.
*Morrisey, A. J., San Antonio.
*Mueller, Edw. L., San Antonio.
*Nesbit, W. E., San Antonio.
*Nicholson, J. R., San Antonio.
*Nixon, J. W., Jr., San Antonio.
*Nixon, P. I., San Antonio.
*Noster, A. H., San Antonio.
*O'Brien, Minnie C., San Antonio.
*Ogilvie, H. H., San Antonio.
*Oldham, J. P., San Antonio.
*Osterdorf, Walter A., San Antonio.
*Osterhout, Paul, San Antonio.
*Pagenstecher, G. A., San Antonio.
Palomo, Valeriano, San Antonio.
*Parker, T. T., San Antonio.
*Parson, W. H., San Antonio.
*Paschal, Frank L., San Antonio.
*Paschal, Geo. H., San Antonio.
*Paschal, Frank, San Antonio.
*Porter, Geo. L., San Antonio.
*Potthast, O. J., San Antonio.
*Powers, V. B., San Antonio.
*Powell, E. T., San Antonio.
*Pridgen, J. L., San Antonio.
Redmond, F. H., San Antonio.
*Reagan, J. H., San Antonio.
*Rice, Lee, San Antonio.
Ricks, Geo. N., San Antonio.
*Roan, Omar, San Antonio.
*Robbie, Mary King, San Antonio.
*Roberts, R. A., San Antonio.
*Robertson, T. W., San Antonio.
*Rosebrough, F. H., San Antonio.
Ross, Rex R., San Antonio.
*Russ, W. B., San Antonio.
*Russell, Dan A., San Antonio.
*Saenz, Daniel, San Antonio.
*Scull, C. E., San Antonio.
*Sharp, Thos. H., San Antonio.
*Shaw, Thad, San Antonio.
*Shelton, Joe H., San Antonio.
*Shepherd, W. F., San Antonio.
*Shipman, E. D., San Antonio.
*Shropshire, L. L., San Antonio.
Smith, B. F., San Antonio.
*Smith, R. K., Elmendorf.
*Sorell, F. W., San Antonio.
*Southgate, Jessie, San Antonio.
*Spring, J. V., Alamo Heights.
*Springer, J. G., San Antonio.
*Stansell, Ivy, San Antonio.
*Steele, J. S., San Antonio.
*Stieler, Albert, San Antonio.
*Steinwinder, C. D., San Antonio.
*Stokes, W. B., San Antonio.
*Stout, B. F., San Antonio.
*Strayhorn, J. M., San Antonio.
*Sykes, E. M., San Antonio.
*Tainter, L. K., Fredericksburg.
*Taylor, Chas. W., San Antonio.
*Terrell, Frederick, San Antonio.
Thomson, F. L., San Antonio.
*Timmins, O. H., San Antonio.
*Urmston, Wm. B., San Antonio.
*Venable, J. Manning, San Antonio.
*Venable, C. S., San Antonio.
*Van Buren, F. A., San Antonio.
*Wall, J. A., San Antonio.
Walsh, F. C., San Antonio.

*Walthall, Thos. J., San Antonio.
*Watts, J. A., San Antonio.
*Weinfield, Louis M., San Antonio.
*Whitacre, Stanley, San Antonio.
*Wilson, Homer T., San Antonio.
*Witte, B. E., San Antonio.
*Wolf, W. M., San Antonio.
*Wyneken, H. O., San Antonio.

COMAL COUNTY MEDICAL SOCIETY.

*Barnwell, J. F., Johnson City.
*Bergfeld, A. W. C., New Braunfels.
Fulcher, R. L., Blanco.
*Garwood, A., New Braunfels.
*Hagler, M. C., New Braunfels.
*Hinman, A. J. (Sec.), New Braunfels.
*Wille, L. G. (Pres.), New Braunfels.
*Wright, R., New Braunfels.

GONZALES COUNTY MEDICAL SOCIETY.

*Brooks, R. C., Waelder.
Dawe, W. T. (Sec.), Gonzales.
Dexter, L. G., Harwood.
*Dunning, W. T., Gonzales.
*Elder, N. A., Nixon.
Fouts, J. J., Gonzales.
Graham, G., Doucette.
Henderson, J. C., Waelder.
Hensley, J. W., Dewville.
*Holmes, George, Gonzales.
Hurley, H. P., Smiley.
*Littlefield, J. B., Nixon.
*Littlefield, V. C. (Pres.), Nixon.
Mannering, M., Cheapside.
Maness, J. A., Gonzales.
*Parr, A. B., Gonzales.
*Robertson, H. W., Waelder.
Smith, J. C., Gonzales.
*Stahl, L., Gonzales.

GUADALUPE COUNTY MEDICAL SOCIETY.

*Anderson, R. B., Seguin.
*Brandenberger, M. B. (Pres.), Seguin.
*Dozier, J. V., Flatonia.
*Gatlin, E. N., Kingsbury.
*Graham, R. L., Schertz.
*Karbach, F. R. (Sec.), Marion.
*Knolle, R. L., Seguin.
Lackey, G. M., Staples.
Moore, P. L., Marion.
Neighbors, A. H., Seguin.
*Poth, N. A., Seguin.
*Raetzsch, C. W., Seguin.
Stamps, A. M., Seguin.
Tullos, H. S.
*Williamson, C., Seguin.

KARNES-WILSON COUNTY MEDICAL SOCIETY.

*Cook, John A., Gillett.
*Hammock, R. L., Kenedy.
Hickle, W. F., Kenedy.
Hutchinson, W. J., Poth.
*Kent, C. M., Kenedy.
*King, S. A., Karnes City.
*Martin, R. G., Lavernia.
Martinez, P., Kenedy.
*Oxford, J. W., Floresville.
Pressly, T. A., Runge.
Rushing, H., Runge.
*Sparks, J. E., Floresville.
*Ware, Ella, Stockdale.
*Willbern, D. Y. (Pres.), Runge.
Young, E R., Charo.
Youngblood, R. C. (Sec.), Falls City.

KERR-KENDALL-GILLESPIE-BANDERA COUNTY MEDICAL SOCIETY.

*Butler, J. O., Bandera.
*Ervin, John H., Bandera.
Gardner, J. N., Sour Lake.
Harzke, O. F., Comfort.
*Jackson, John D. (Sec.), Kerrville.
*Jones, C. C., Comfort.
*Keidel, Victor, Fredericksburg.
*McDonald, J. E. (Pres.), Kerrville.
*Nooe, J. F., Boerne.
*Palmer, E. E., Kerrville.
Peden, J. E., Fredericksburg.
Rappold, J. M., Bandera.
Roberts, A. A., Kerrville.
*Secor, Wm. Lee, Kerrville.
Swazey, H. Y., Kerrville.
*Sherrill, C. A., Medina.
*Thompson, S. E., Kerrville.
*Witte, O. B., Fredericksburg.

LaSALLE-DIMMIT-FRIO-McMULLEN COUNTY MEDICAL SOCIETY.

Barnard, W. L., Carrizo Springs.
*Beall, J. E., Pearsall.
Fay, Harold W., Dilley.
*Hargus, J. W., Asherton.
*Howard, E. M. (Pres.), Pearsall.
*Lightsey, J. N., Cotulla.
Pickett, B. E. (Sec.), Big Wells.
*Sanders, J. T., Dilley.
Whittaker, A., Big Foot.
Williamson, L. C., Pearsall.
Woods, G. S., Devine.

MEDINA-UVALDE-MAVERICK-VAL VERDE-TERRELL-EDWARDS-R-K-Z COUNTY MEDICAL SOCIETY.

Bowman, A. R., Uvalde.
*Cantu, Lorenzo (Pres.), Eagle Pass.
Cox, Geo. W., Del Rio.
*Craven, E. E., Utopia.
*Eads, J. W., Barksdale.
Gates, E. F., Eagle Pass.
*Hines, B. M., Uvalde.
Horton, J. J., Eagle Pass.
*Hudson, S. B., Sabinal.
Knox, Thos. R., Uvalde.
*Koontz, L. A., La Coste.
Myrick, C. R., Uvalde.
Orr, B. F., Del Rio.
*Ramsdell, M. A., Eagle Pass.
Rogers, J. E., Rock Springs.
*Ross, H. B., Del Rio.
*Scott, R. M., Del Rio.
*Smith, W. H., Hondo.
*Woods, E. U., Sabinal.
Wood, N. I., Cline.
*York, D. A. (Sec.), Del Rio.

SIXTH OR CORPUS CHRISTI DISTRICT.

Dr. F. U. Painter, Corpus Christi, Councilor.

BEE COUNTY MEDICAL SOCIETY.

*Cayo, E. P., San Antonio.
*Chilton, L. W., Goliad.
*Griffin, L. L., Beeville.
*Hunter, J. B., Skidmore.
*LaForge, Herschel, George West.
McDuff, D. R., Berclair.
McNeill, S. E. (Sec.), Beeville.
*Neeley, Houston, Beeville.
*Parr, L. E., Beeville.
*Poff, C. M., Tuleta.
Reagan, C. H., Beeville.
Stephens, G. M., Beeville.
*Turner, A. J. (Pres.), Beeville.
*Wheeler, F. B., Skidmore.
*Williamson, C. D., Three Rivers.

CAMERON COUNTY MEDICAL SOCIETY.

Brown, Wilbert O., San Benito.
*Cash, Clarence M., San Benito.
Castillo, Jose A., Brownsville.
Cole, B. L., Brownsville.
*Davidson, Noah A., Harlingen.
Dickason, E. E., Parral, Mex.
*Malone, Duggan, Austin.
Hockaday, J. A., Point Isabel.
*Hunter, John H. (Sec.), La Feria.
Lawrence, Oscar V., Brownsville.
Letzerich, Casper W., Harlingen.
Loew, Harry K. (Pres.), Brownsville.
McBride, George A., Harlingen.
*Morris, Edwin T., San Benito.
Padilla, Antonio G., Brownsville.
Pumarejo, Alfredo V., Brownsville.
Rentfro, Jas. L., Brownsville.
Sizar, Elma M. A., Rio Hondo.
Spivey, Wm. E., Brownsville.
Tribble, John J., Brownsville.
Utley, R. E., Harlingen.
Vinsant, Wm. J., San Benito.
White, Harry A., Raymondville.
*Works, Benjamin O., Brownsville.
Works, Bynum M., Brownsville.
Works, Royal L., Brownsville.
Yantis, Geo. R., Brownsville.

HIDALGO COUNTY MEDICAL SOCIETY.

Austin, A. J. J., Mission.
Balli, Carlos M., McAllen.
*Barrera, C. E., Mission.
Buck, Chas. B. (Sec.), Mercedes.
*Burnett, Thos. R., Mission.
*Davis, L. M., Donna.
*Doss, Jas. M., McAllen.
*Edgerton, G. W. (Pres.), Rio Grande.
*Edgerton, Mary H., Rio Grande.
Gaff, J. V., Rio Grande.
*Garst, H., Austin.
*Harrison, J. G., McAllen.
Heidrick, D. L., Mercedes.
Jeffries, J. W., Mission.
Lemmon, H. B., Weslaco.
Lockhart, J. P., Pharr.
*Mahone, J. R., Pharr.
*Malone, W. T., Corsicana.
Martin, C. J., Alamo.
McCann, J. D., Raymondville.
McGee, W. N., McAllen.
McMillan, J. B. F., Edinburgh.
Miller, J. A., McAllen.
Neal, W. S., Mercedes.
*Osborne, Frank E., McAllen.
Solis, C., Rio Grande.
Stephens, J. D., Weslaco.
*Webb, J. G., Mercedes.
Whigham, J. G., Donna.
Whigham, W. E., Donna.
*White, G. E., San Juan.
*White, H. D., Monterrey, Mex.
Woodall, W. B., Hidalgo.

KLEBERG COUNTY MEDICAL SOCIETY.

*Allison, Hendery, Kingsville.
Bartlett, Glenn, Kingsville.
Campbell, I. N., Kingsville.
Guajardo, Eusebio, Monterrey, Mex.
*Mayo, B. E., Bishop.
Robertson, J. J. (Sec.), Kingsville.
White, J. H., Kingsville.
*Wiles, W. T., Riviera.
*Yeager, C. P. (Pres.), Kingsville.

NUECES COUNTY MEDICAL SOCIETY.

*Arnold E. O., Corpus Christi.
*Barnard, W. C., Corpus Christi.
Blankmeyer, H. H., Aransas Pass.
Carruth, W. E., Corpus Christi.
*Carter, N. D., Robstown.
Clark, D. H., Robstown.
*Davisson, A. W. (Sec.), Corpus Christi.
*Dodge, S. T., Corpus Christi.
*Giles, H. R., Corpus Christi.
Grant, J. H. (Pres.), Corpus Christi.
Halstead, F. R., Corpus Christi.
Harthill, E. A., Corpus Christi.
Heaney, H., Corpus Christi.
*Kaffie, L., Corpus Christi.
Letzrich, A. M., Harlingen.
*Mathis, Edgar, Corpus Christi.
Morgan, J. B., Robstown.
Nast, J., Corpus Christi.
North, A., Corpus Christi.
*Painter, F. U., Corpus Christi.
*Passmore, B. H., Corpus Christi.
Redmond, H., Corpus Christi.
Speer, A. H., Corpus Christi.
*Thompson, J. M., Robstown.
*Watson, C. O., Corpus Christi.
White, H. A., Corpus Christi.
*Williams, M. L., Robstown.
*Wills, W. E., Corpus Christi.
Wyche, G., Robstown.

SAN PATRICIO-ARANSAS-REFUGIO COUNTY MEDICAL SOCIETY

Devendorf, L. E., Taft.
*Dodson, W. M., Woodsboro.
Elkins, H. T., Sinton.
Fultz, Hugh, Tivoli.
*Glover, G. E. (Pres.), Refugio.
*Noble, Walter (Sec.), Aransas Pass.
Penrod, L., Taft.
*Worley, Preston, Sinton.

WEBB COUNTY MEDICAL SOCIETY.

*Austin, Holcomb M. (Pres.), Laredo.
Canseco, F. R., Laredo.
*Crawford, Jas. L. (Sec.), Laredo.
Cullinan, Mike, Laredo.
Davis, B. R., Laredo.
*Dyson, T. N., Laredo.
Garza, C. M., Laredo.
Graham, S. H., Laredo.
Halsell, Jno. T., Laredo.
Hall, Horace C., Laredo.
*Hamilton, H. J., Laredo.
King, Nat, Laredo.
Leal, M. T., Laredo.
Lightner, O. N., Laredo.
Lowry, Willis E., Laredo.
Naranjo, Jose S., Laredo.
*Sauvignet, E. H., Laredo.

Sherman, J. W., Mirando.
Simpson, J. A., Laredo.
Stetson, Thomas, Hebbronville.
*Wentz, G. W., Mirando City.
Wilcox, A. W., Laredo.

SEVENTH OR AUSTIN DISTRICT.

Dr. Joe Gilbert, Austin, Councilor.

BASTROP COUNTY MEDICAL SOCIETY.

*Campbell, W. E., Elgin.
*Chapman, P., Smithville.
*Combs, H. B., Bastrop.
Dawson, I. J., Bastrop.
Harris, N. B., Red Rock.
*Jones, Geo. M., Smithville.
King, G. T., Elgin.
*Kraulik, F. J., Smithville.
Nofsinger, I. B., Elgin.
*Otken, C. H. (Pres.), Paige.
Powell, J. H. E., Smithville.
Southern, G. W., McDade.
Taylor, T. B. (Sec.), Bastrop.
Wood, W. E., Elgin.

CALDWELL COUNTY MEDICAL SOCIETY.

Alexander, Keeton, McMahan.
Benbow, Earlie A., Luling.
Burks, James M., Dale.
Coopwood, Thomas B., Lockhart.
*Francis, Sidney J., Luling.
*Henry, Harvey B. (Pres.), Luling.
Lancaster, Howard E. (Sec.), Lockhart.
Luckett, F. C., Fentress.
Morgan, William M., Lockhart.
Nichols, Clay, Luling.
Nichols, Cranz, Maxwell.
O'Brannon, William H., Lockhart.
*Pitts, Minor W., Luling.
*Ross, Alonzo A., Lockhart.
*Smith, Edgar, Lockhart.
Watkins, J. M., Luling.
Williamson, Drew B., Mendoza.

HAYS COUNTY MEDICAL SOCIETY.

Beall, E. F., San Marcos.
De Steiger, J. R., San Marcos.
*Edwards, L. L. (Pres.), San Marcos.
Kinney, T., San Marcos.
Lee, L. L., San Marcos.
Parke, J. N., San Marcos.
Shaver, P. J., San Marcos.
Taylor, E. B., Kyle.
Van Ness, J. M., San Marcos.
*Williams, M. C. (Sec.), San Marcos.
*Williams, W. C., San Marcos.

LEE COUNTY MEDICAL SOCIETY.

Connor, A. C. (Sec.), Lexington.
*Hertel, H. G., Giddings.
Johnson, J. M., Giddings.
Loose, T. C., Dime Box.
Mayfield, I. N., Giddings.
Shaffer, C. (Pres.), Lexington.
*York, W. E., Giddings.

LLANO COUNTY MEDICAL SOCIETY.

Fowler, W. Y., Llano.
Gray, G. L., Llano.
*Huff, Oscar (Sec.), San Marcos.
Selman, H. S. (Pres.), Llano.
Townsend, E. D., Llano.

SAN SABA COUNTY MEDICAL SOCIETY.

*Behrns, C. L. (Sec.), Cherokee.
*Bickham, W. S. (Pres.), San Saba.
Hays, P. G., Richland Springs.
*Nelson, A. D., Richland Springs.
Stone, Ira O., San Saba.

TRAVIS COUNTY MEDICAL SOCIETY.

Bennett, T. J., Austin.
*Beverly, A. F., Austin.
*Black, C. C., Austin.
Black, W. B., Austin.
Boerner, M. H., Austin.
Bradfield, J. W., Austin.
Brady, J. J., Austin.
Brownlee, C. H., Austin.
Carrington, H. D., Pflugerville.
*Clark, S. J., Austin.
*Christian, J. S., Austin.
*Cloud, R. E., Austin.
Currie, R. F., Manchaca.
Decherd, Geo. M., Austin.
Eckhardt, J. C. A., Austin.
*Edens, Lee E., Austin.
Garcia, Alberto G., Austin.
Gates, Chas. S., Austin.
*Gibson, J. W., Austin.
*Gilbert, G. H., Austin.
*Gilbert, Joe, Austin.
*Goddard, C. W., Austin.
Graham, G. M., Austin.
*Granberry, H. B., Austin.
Greer, Wm. W., Austin.
Gregg, F. C., Austin.
Gullett, J. F., Austin.
Haigler, Sam, Austin.
Hairston, T. C., Austin.
Harper, H. W., Austin.
Harper, W. A., Austin.
*Hilgartner, H. L., Austin.
Holtzclaw, W. E., Buda.
Howze, J. E., Austin.
Hudson, R. B., La Feria.
*Hudson, S. E., Austin.
Jackson, N. R. (Pres.), Manor.
*Jones, Ben F., Austin.
*Key, Sam, Austin.
*Kirk, L. H., Austin.
Kreisle, M. F., Austin.
Krueger, Ernest, Austin.
Kuhn, August, Pflugerville.
Lauderdale, Claude, Buda.
Lenz, R. P., Austin.
*Lightfoot, W. D., Austin.
Loving, J. M., Austin.
McCaleb, W. E., Austin.
McKeown, Hugh S., Austin.
McLaughlin, F. P., Austin.
McLaughlin, J. W., Austin.
Martin, Zeno T., Austin.
Mathews, C. A., Austin.
Maxwell, F. A., Austin.
Maxwell, T. O., Austin.
Murray, R. V., Austin.
Nichols, J. R., Austin.
Pettway, T. R., Austin.
Preston, John, Austin.
*Richardson, Dalton (Sec.), Austin.
*Roe, Mary Elizabeth, Austin.
Schwab, E. H., Austin.
*Scott, H. A., Austin.
Scott, Z. T., Austin.
Shipp, Robert W., Austin.
Shuford, Felix B., Austin.
Smartt, M. P., Austin.
*Smith, Linsey, Austin.
Steiner, Ralph E., Austin.
Stroburg, Dr. John A., Austin.
Suehs, P. E., Austin.
Talor, Summerfield, Austin.
*Thomas, John C., Austin.
*Watt, Will E., Austin.
Watt, W. Neal, Austin.
Weller, C. B., Austin.
Weller, Clarence, Austin.
Wickline, R. M., Austin.
Wilhite, J. T., Austin.
*Woolsey, S. A., Austin.
*Wooten, Joe S., Austin.
Wooten, Goodall H., Austin.

WILLIAMSON COUNTY MEDICAL SOCIETY.

Atkinson, O. B., Florence.
Atkinson, W. H., Florence.
Beckman, A., Bartlett.
*Bledsoe, R. E. B., Taylor.
Collier, J. I., Taylor.
Crawford, C. H., Jarrell.
Doak, Ed (Pres.), Taylor.
Edens, H. L., Bertram.
*Flinn, J. F., Hutto.
*Foster, C. C., Granger.
Fowler, W. D., Liberty Hill.
Gregg, D. B., Round Rock.
*Hopkins, Y. F., Taylor.
*Harrell, T. M., Corpus Christi.
Hazelwood, W. R., Leander.
Helms, W. L., Taylor.
Howell, A., Burnet.
*Kirkpatrick, B. A., Thrall.
Kirkpatrick, S. B., Thrall.
Kuehne, Henry, Coupland.
Martin, J. R., Georgetown.
Martin, S. S., Georgetown.
Martin, Walter, Georgetown.
Mikeska, E. F., Taylor.
Moses, W. H., Georgetown.
Mussil, A. C., Granger.
*Pettus, W. G. (Sec.), Georgetown.
*Randolph, V. P., Cibolo.
Robinson, J. D., Florence.
Ross, G. D., Liberty Hill.
Schultz, W. M., Georgetown.
Sharp, M. R., Granger.
*Stevens, G. W., Leander.
Stromberg, E. W., Taylor.
*Thomas, E. M., Georgetown.
Vaughan, J. H., Taylor.
Vaughan, T. D., Bertram.
Wedemeyer, G. A., Taylor.
Wedemeyer, W. C., Walburg.
Webber, W. G, Round Rock.
Zorns, W. S., Taylor.

EIGHTH OR DEWITT DISTRICT.

Dr. O. S. McMullen, Victoria, Councilor.

COLORADO COUNTY MEDICAL SOCIETY.

*Duve, C. E., Weimar.
Forrest, B. F., Eagle Lake.
*Gordon, E. C. (Pres.), Columbus.
Harrison, R. H., Alleyton.
McLeary, S. B., Columbus.
McLellan, R. L., Eagle Lake.
*Peters, Leo J., Schulenburg.
Potthast, A. H., Weimar.
Youens, W. G. (Sec.), Columbus.

DeWITT COUNTY MEDICAL SOCIETY.

*Allen Geo. W. Jr., Yorktown.
Arnecke, Christopher A., Arneckeville.
*Beckmann, Albert, Yoakum.
Blackwell, Finley D., Hochheim.
*Boothe, Sterling P., Cuero.
*Brown Harry H. Jr., Yoakum.
*Brown, Harry H. Sr., Yoakum.
*Burns, John W., Cuero.
Cross, Geo. W., Yorktown.
*Dobbs, James C., Cuero.
*Eckhardt, Herman C., Yorktown.
Forbese, Joseph R., Cuero.
Gillette, William R., Cuero.
Hale, Jesse W., Yoakum.
*Kahn, Silvian D., Nordheim.
Lackey, Joseph M., Cuero.
*Milner, Robert M., Yoakum.
*Nowierski, Bronislaw (Sec.), Yorktown.
Nowierski, Leon W. (Pres.), Yorktown.
Oquin, C. Lafayette, Weesatche.
Paine, Walter H., Cuero.
*Pridgen, J. Edward, Thomaston.
Feuss, Dr. G. T., Cuero.
Sale, Walter W., Cuero.

FAYETTE COUNTY MEDICAL SOCIETY.

Clark, I. E., Schulenburg.
*Guenther, F. J., La Grange.
Hoch, Chas. M. (Sec.), La Grange.
*Knolle, R. H., La Grange.
*Marecic, F. J., Flatonia.
McKay, Donald, Flatonia.
*Moss, Robt. E., La Grange.
Smith, J. W., Moore.
*Young, F. E., West Point.

LAVACA COUNTY MEDICAL SOCIETY.

Dufner, C. T., Hallettsville.
*Gray, J. D., Yoakum.
*Guenther, J. G. (Pres.), Moulton.
Jaeggli, Sam (Sec.), Moulton.
*Kotzebue, A. M., Moulton.
*Kopecky, C. L., Yoakum.
*Marek, E. H., Yoakum.
*Schulze, G., Shiner.
*Shropshire, W., Yoakum.
*Wagner, F. M., Shiner.
Weiss, J., Hallettsville.
Youngkin, J. S., Yoakum.

MATAGORDA COUNTY MEDICAL SOCIETY.

Bomar, C. V., Gulf.
Bouldin, W. W., Bay City.
Dimmitt, F. W., Palacios.
Loos, H. H., Bay City.
*Morton, A. S., Bay City.
Reed, J. W., Bay City.
Scott, E. E., Bay City.
Simons, J. E. (Sec.), Bay City.
Wagner, J. R., Palacios.

VICTORIA-CALHOUN-GOLIAD COUNTY MEDICAL SOCIETY.

DeTar, W. T. Jr., Victoria.
DeTar, W. T. Sr., Victoria.
Gibson, A. D., Port Lavaca.
Grace, T. W., Port Lavaca.
*Hicks, J. O. (Pres.), Victoria.
Hopkins, J. V., Victoria.

*Kirkland, L. W., Goliad.
Lander, J. H., Victoria.
Lander, R. G., Goliad.
McMullen, O. S., Victoria.
Roemer, F. J., Port Lavaca.
Rush, J. W., Bloomington.
Ryon, O. H., Seadrift.
*Shields, F. B., Victoria.
Smith, J. L., Victoria.
Stewart, O. R., Victoria.
Ward, R. W. (Sec.), Victoria.

WHARTON-JACKSON COUNTY MEDICAL SOCIETY.

Andrews, J. M., Wharton.
Cloud, W. O., Iago.
Davidson, G. L., Wharton.
Davidson, T. L., Wharton.
*Halamicek, J. A., El Campo.
*Jones, C. L., East Bernard.
*Lancaster, W. H., Ganado.
*Lincecum, A. L., San Antonio.
Oldham, J. D., El Campo.
*Redwine, D. P., El Campo.
Reeves, H. V. (Sec.), El Campo.
Reynolds, H. C. (Pres.), Louise.
Valls, B. R., Wharton.
Whitfield, W. E., Ganado.

NINTH OR SOUTHERN DISTRICT

Dr. W. B. Thorning, Houston, Councilor.

AUSTIN COUNTY MEDICAL SOCIETY.

Brown, Walter T., Wallis.
*Hover, Frank W., Sealy.
Knolle, Bernard E. (Pres.), Industry.
Knolle, Otto J., New Ulm.
Knolle, Roger E., Industry.
Kubricht, Theophelis, Wallis.
Kroulik, John, Bellville.
Neely, Jubal A., Bellville.
Roensch, Herbert E., Kenney.
Schramm, Chas. J., Fayetteville.
*Steck, Otto E. (Sec.), Bellville.
Trenckmann, Otto A., Bellville.
Waldrop, John W., Sealy.

BRAZORIA COUNTY MEDICAL SOCIETY.

Hampil, C. C., Brazoria.
Maxey, S. B., Angleton.
Pollard, A. J., Alvin.
Schafer, C. L., Alvin
Stafford, Brooks (Sec.), Angleton.
Weems, M. A., Columbia.
*Winn, F. R., Angleton.

BURLESON COUNTY MEDICAL SOCIETY.

Aiken, A., Chriesman.
Goodnight, T. L., Caldwell.
*Krueger, A. G. (Pres.), Caldwell.
McLean, B. O. (Sec.), Caldwell.
Richardson, W. P., Somerville.
*Stork, E. W., Somerville.

FORT BEND COUNTY MEDICAL SOCIETY.

Blackwell, W. G. L., Sugarland.
*Boyle, Jas. W., Jr. (Sec.), Richmond.
Deatherage, S. G., Sugarland.
*Johnson, J. C. (Pres.), Richmond.
Marshall, Wm. E, Needville.
Ramsay, G. S., Sugarland.
*Weeks, J. W., Rosenberg.
Yates, John S., Rosenberg.

GALVESTON COUNTY MEDICAL SOCIETY.

Andronis, N. (Sec.), Galveston.
Aves, F. W., Galveston.
Azar, J. A., Galveston.
Chapman, L. E., Galveston.
Cone, R. Earl, Galveston.
Cooke, H. P., Galveston.
*Cooke, W. R., Galveston.
*Crutchfield, E. D. (Pres.), Galveston.
Dallas, L. M., League City.
Danforth, F. N., Texas City.
Davidson, J. S., Galveston.
Dietzel, Marie, Galveston.
Dimmitt, Frank, Galveston.
Fahring, G. H., Anahuac.
Fisher, W. C. Jr., Galveston.
Fisher, W. C. Sr., Galveston.
Flynn, J. G., Galveston.
Fowler, C. F., Galveston.
Gammon, Wm., Galveston.
*Graves, M. L., Galveston.
*Haggard, C. H., Galveston.
Harris, L. R., Galveston.
*Harris, T. H., Galveston.
Hartman, H. C., Galveston.
*Hill, W. H., Galveston.
Hoecker, W. L., Galveston.
Huddleston, W. E., Galveston.
Jinkins, J. L., Galveston.
Jinkins, W. J., Galveston.
*Keiller, Violet, Galveston.
*Keiller, Wm., Galveston.
Kleberg, Walter, Galveston.
Knight, H. O., Galveston.
Kopecky, Joseph, Galveston.
Kruger, Fred R., Galveston.
Lechenger, G. C., Galveston.
Lee, Geo. H., Galveston.
Morgan, Geo. L., Anahuac.
Patton, O., League City.
Peters, O. K., Galveston.
Randall, Edward, Galveston.
Randall, Edward, Jr., Galveston.
Reading, Boyd, Galveston.
*Robinson, H. Reid, Galveston.
Rowley, Frances, Galveston.
Sappington, H. O., Galveston.
Schilling, J. G., Goose Creek.
Shearer, A. R., Mont Belvieu.
*Singleton, A. O., Galveston.
Spiller, W. F., Galveston.
*Starley, W. F., Galveston.
Stephens, E. M. F., Galveston.
*Stone, C. T., Galveston.
*Thompson, J. E., Galveston.
Terry, Theodore L., Galveston.
Tucker, J. P., Galveston.
Wall, Dick P., Galveston.

GRIMES COUNTY MEDICAL SOCIETY.

Emory, S. J. (Pres.), Navasota.
Greenwood, W. W., Navasota.
Hammons, W. W., Plantersville.
Harris, E. A. (Sec.), Navasota.
Harris, R. D., Navasota.
Harris, G. C., Courtney.
McAlpine, A. D., Navasota.
Parker, M. E., Navasota.
Peeples, D. L., Navasota.
Quinn, W. J., Iola.
Sanders, G. C., Richards.
Smith, J. E., Bedias.
Wilson, W. T., Navasota.

HARRIS COUNTY MEDICAL SOCIETY.

*Agnew, J. H., Houston.
*Alexander, J. C., Houston.
Allan, L., Houston.
Allan, N. N., Houston.
*Applebee, E. W., Houston.
*Archer, P. M., Houston.
Armstrong, E. M., Houston.
Arnold, E. M., Houston.
Aves, C. M., Houston.
Aydam, C. W., Houston.
Barnes, F. L., Houston.
Bartlett, H. L. (Sec.), Houston.
Bell, W. E., Houston.
Bennett, W. H., Humble.
*Bertner, E. W., Houston.
*Bost, J. R., Houston.
Bourland, F. M., Houston.
*Braden, A. H., Houston.
Bradley, R. L., Houston.
Brenner, M. L., Houston.
*Brokaw, Chas. P., Houston.
Bruhl, Chas. E., Houston.
*Brumby, W. M., Houston.
Bryan, W. G., Houston.
*Calaway, F. O., Houston.
Campbell, W. D., Goose Creek.
Clarke, J. E., Houston.
Clarke, W. A., Houston.
*Cody, C. C., Houston.
Compere, T. H., Houston.
Coop, B. F., Houston.
*Coulter, W. W., Houston.
Cox, R. L., Houston.
Creviston, C. D., Houston.
Cronin, P. H., Houston.
Cruse, P. R., Houston.
*Daily, L., Houston.
Daily, Ray K., Houston.
*Daniels, J. E., Houston.
David, S. D., Houston.
*Dawes, R., Houston.
Dawson, J. W., Houston.
Denman, P. R., Houston.
DeWalt, D. C., Houston.
Dickson, T. A., Houston.
*DuBose, J. B., Humble.
Dodge, W. E., New York.
Duckett, J. D., Houston.
Dudley, N. L., Goose Creek.
*Duncan, Clara K., Houston.
Dunnam, T. E., Houston.
Durham, M. E., Houston.
Eckhart, W. R., Houston.
Eidman, F. G., Houston.
Ellis, B. V., Houston.
Englehart, H. A., Houston.
Erhardt, Wm., Westfield.
*Feagin, H. C., Houston.
Fleming, R. H., Houston.
*Flickwir, A. H., Houston.
*Florence, J. H., Houston.
Foote, S. A., Houston.
Foster, J. B., Houston.
*Foster, J. H., Houston.
Freundlich, Thos., Houston.
Gamble, J. F., Houston.
Gantt, M. A., Houston.
Gerson, G. R., Houston.
Gilliam, H. R., Houston.
Glover, F. S., Houston.
*Goar, E. L., Houston.
Gooch, F. B., Houston.
Graves, J. H., Houston.
Gray, E. N., Houston.
Green, C. C. (Pres.), Houston.
*Greenwood, Jas., Houston.
*Greer, A. E., Houston.
Greer, David, Houston.
Griffith, C. W., La Porte.
Grimes, G. D., Houston.
Haden, H. C., Houston.
Haley, W. A., Houston.
*Hamilton, Gavin, Houston.
Handley, L. L., Houston.
Hanna, L. C., Houston.
*Hargrove, R. M., Houston.
Harris, C. P., Houston.
Harris, J. E., Houston.
Harris, T. F., Houston.
Harrison, J. W., Houston.
Harrison, R. H., Houston.
Hayes, H. T., Houston.
*Heard, A. G., Houston.
Heard, E. L., Houston.
Herndon, R. F., Houston.
Hill, James A., Houston.
Hill, Thos. G., Houston.
Hodges, J. E., Houston.
Hoeflich, C. W., Houston.
*Holley, A. S., Houston.
*Howard, A. P., Houston.
*Israel, N. E., Houston.
*Israel, Sidney, Houston.
Iiams, F. J., Houston.
*James, A. J., Houston.
Johnson, H. W., Houston.
Johnson, J. E., Houston.
*Johnston, R. A., Houston.
Kendall, D. H., Houston.
Kennedy, E. J., Houston.
Kenner, E. B., Houston.
King, F. B., Houston.
*Kirkham, H. L. D., Houston.
Kneip, A. T., Houston.
*Knox, R. W., Houston.
Krause, A., Houston.
Kuebler, L. W., Houston.
Kyle, J. Allen, Houston.
Lancaster, E. H., Houston.
*Lapat, Wm., Houston.
Larendon, G. W., Houston.
Ledbetter, P. V., Houston.
Legnard, J. B. Jr., Houston.
*Levy, M. D., Houston.
Ligon, J. G., Houston.
Lister, S. M., Houston.
Logue, L. J., Houston.
Looper, S. A., Houston.
Ludeau, J. E., Houston.
Lummis, F. R., Houston.
Maresh, H. R., Houston.
Maresh, R. E., Houston.
Martin, W. H., Houston.
Mathews, J. F., Houston.
*McDeed, W. G., Houston.
McHenry, R. K., Houston.
McKee, J. W., Houston.
McMeans, R. H., Houston.
McMurray, Allen, Houston.
*Michael, J. C., Houston.
Miller, A. L., Houston.
Mitchner, J. M., Memphis, Tenn.
Moers, R. H., Houston.
*Moore, J. T., Houston.

Moore, S. H., Houston.
Morris, R. T., Houston.
Morrison, H. K., Houston.
Motherall, J. D., Houston.
Mullen, J. A., Houston.
Myers, C. D., Houston.
Mynatt, A. J., Houston.
Neal, T. M., Houston.
Noark, Henry, Fairbanks.
*Norsworthy, O. L., Houston.
O'Bannion, M. L., Houston.
O'Farrell, J. M., Houston.
Oliver, J. T., Houston.
Orman, McDonald, Houston.
*Park, J. H., Houston.
Parker, G. D., Houston.
Parkhill, F. G., Houston.
Patterson, C. U., Houston.
Pawelek, I. L., Houston.
Pawelek, L. G., Houston.
Payne, C. F., Dayton.
Preister, W. G., Houston.
Pritchett, E. I., Houston.
Pulliam, S. T., Houston.
Ralston, Wallace, Houston.
*Ramsey, W. E., Houston.
Raney, L. W., Houston.
Read, H. K., Houston.
Red, S. C., Houston.
*Robbins, E. F., Houston.
Robinson, G. J., Houston.
Ross, W. H., Houston.
Sauerman, W. O., Houston.
Scardino, P. H., Houston.
*Schnell, J. H., Houston.
Schoepfer, R. F., Houston.
Scott, J. W., Houston.
Scott, R. T., Houston.
*Short, J. L., Houston.
Sinclair, T. A., Houston.
Skaggs, R. H., Houston.
Slatapar, F. J., Houston.
*Sloan, P. A., Houston.
Smith, B. F., Houston.
Smith, C. T., Houston.
Smith, F. D., Houston.
Smith, P. L., Houston.
Sparks, J. E., Houston.
Spiller, J. B., Houston.
Spivak, L. J., Houston.
*Spurlock, G. H., Houston.
Stokes, M. B., Houston.
Strozier, Wm., Houston.
Talley, A. T., Houston.
Taylor, J. L., Houston.
Taylor, M. J., Houston.
Thoma, Earl, Houston.
Thorn, J. W., Houston.
*Thorning, W. B., Houston.
Tribble, J. M., Houston.
Turner, B. W., Houston.
Turner, J. H., Houston.
Tusa, T. S., Houston.
Van Zandt, T. B., Houston.
Wallis, Marshall, Houston.
*Waples, F. A., Houston.
Weir, W. M., Houston.
Westmoreland, J. P., Houston.
White, A. E., Houston.
White, A. W., Houston.
*White, J. L., Houston.
Williams, W. O., Houston.
Wilson, Roy D., Houston.
*Wood, Martha A., Houston.
Woolley, T. O., Houston.
Wooters, John, Houston.
Wright, Ernest, Houston.
Wright, E. A., Houston.
Young, C. B., Houston.

MADISON COUNTY MEDICAL SOCIETY.

*Burney, J. E., North Zulch.
Day, G. P. (Sec.), Madisonville.
Morris, Jas. E. (Pres.), Madisonville.
McKay, James A., Madisonville.
*Zulch, J., North Zulch.

MONTGOMERY COUNTY MEDICAL

*Boyd, J. M., Pasadena.
Bybee, J. A., Conroe.
*Covington, C. M., Montgomery.
Falvey, T. S., Conroe.
Hooper, W. N., Conroe.
*Ingram, W. P. (Sec.), Conroe.
Luehrs, H. E., Tamina.
Miller, Samuel A., Dallas.
Morris, W. D., Conroe.
Tinsley, O. M., (Pres.), Conroe.
Ware, J. M., Magnolia.
Young, F. A., Montgomery.

POLK COUNTY MEDICAL SOCIETY.

Bergman, H., Livingston.
Bevil, J., Hull.
Handley, B. (Sec.), Corrigan.
Hubert, J. M., Cleveland.
Love, R., Livingston.
Marsh, B. C., Livingston.
McCardle, D., Livingston.
McCardle, W. K., Cold Spring.
Pullen, W. G. (Pres.), Corrigan.
Williams, M., Onalaska.

WALKER COUNTY MEDICAL SOCIETY.

Angier, E. L., Huntsville.
Bush, L. H., Huntsville.
Calloway, H. A., Oakhurst.
Crothers, V. M., San Augustine.
Curtis, M. E., Huntsville.
Fowler, W. E. (Pres.), Huntsville.
Gustine, N. W., Alcedo.
Martin, J. R., Huntsville.
Robertson, H. S., Elmina.
*Tharp, R. A., Shiro.
Thomason, J. W. (Sec.), Huntville.

WALLER COUNTY MEDICAL SOCIETY.

Hill, G. E., Waller.
Jones, M. A., Hempstead.
Le Grand, C. W. (Pres.), Hempstead.
*Mahan, L. L. (Sec.), Hempstead.

WASHINGTON COUNTY MEDICAL SOCIETY.

*Becker, Arthur E. (Sec.), Brenham.
Burford, Jas. M., Independence.
Campbell, Wm. R. (Pres.), Chapel Hill.
*Hasskarl, Robt. A., Brenham.
Hasskarl, Walter F., Brenham.
Hodde, Fred H., Burton.
Hodde, Louis F., Houston.
Knolle, Edmond R., Brenham.
*Knolle, Kinch C., Brenham.
*Knolle, Waldo A., Brenham.
Knolle, Wm. L. F., Washington.
Kusch, Luther, Gay Hill.
Lenert, Robt. H., Brenham.
Moore, Oliver S., Burton.
Nicholson, Richard E., Brenham.
*Schoenvogel, Otto F., Brenham.
Williamson, John R., Brenham.

TENTH OR SOUTHEASTERN DISTRICT.

Dr. D. S. Wier, Beaumont, Councilor.

ANGELINA COUNTY MEDICAL SOCIETY.

Alexander, C. E., Waco.
Beazley, W. H., Honey Island.
Bledsoe, R. B., Lufkin.
Cannon, R. T., Lufkin.
Carr, K. K., Devers.
Childers, D. M. (Sec.), Lufkin.
*Clark, E. T., Kelty's.
Dale, J. R., Diboll.
Denman, L. H., Lufkin.
Dillen, O. M., Lufkin.
*Dunn, W. W., Lufkin.
Hawkins, J. W. (Pres.), Lufkin.
*Mathews, R. L., Lufkin.
Stewart, C. B., Huntington.
*Sweatland, E. A., Lufkin.
Taylor, T. A., Lufkin.
Tinkle, L. T., Lufkin.
Treadwell, W. B., Lufkin.
Van Nuys, J. C., Lufkin.
Tenny, L. P., Lufkin.
Wilson, Henry, Huntington.

JASPER-NEWTON COUNTY MEDICAL SOCIETY.

Alexander, C. B., Bessmay.
Blow, F. T., Buna.
Fortenbery, J. C., Voth.
Kelly, William R., Deweyville.
Masterson, J. P., Beaumont.
McCreight, W. F. (Sec.), Kirbyville.
Ogden, U. B., Kirbyville.
Ogden, T. R., Blox.
Powell, C. N., Deweyville.
Richardson, A. J., Jasper.
Sweeney, B. A. (Pres.), Newton.

JEFFERSON COUNTY MEDICAL SOCIETY.

Alexander, H. E., Beaumont.
Autrey, A. R., Port Arthur.
*Barclay, A. P., Wharton.
Barr, H. A., Beaumont.
Bevil, H. G., Silsbee.
Bevil, John R., Beaumont.
Bledsoe, James A., Port Arthur.
*Bledsoe, M. F., Port Arthur.
Blevins, J. D., Beaumont.
Brandeau, W. H., Beaumont.
Broussard, J. A., Port Arthur.
*Brown, W. D., Beaumont.
Bussey, N. A., Port Arthur.
Carr, J. E., Port Arthur.
Chaisson, J. L., Port Neches.
*Cobb, C. A., Beaumont.
Cole, C. A., Winnie.
Crumpler, W. E., Port Arthur.
Cruse, J. B., Beaumont.
Cunningham, W. W. (dec'sed), Beaumont
Davison, B. H. (Sec.), Port Arthur.
DuBose, A. L., Village Mills.
*Fears, T. Alvin, Port Arthur.
Ferguson, E. C., Beaumont.
Garth, J. W., Beaumont.
*Gibson, J. A. (Pres.), Port Arthur.
Gober, J. M., Beaumont.
Goldstein, Louis, Beaumont.
Greenburg, P. B., Beaumont.
Grimes, Ivison, Voth.
Grimes, Jasper, Beaumont.
Harlan, H. D., Beaumont.
Hart, F. B., Sour Lake.
*Haizlip, J. H., Nederland.
*Hodges, O. S., Beaumont.
*Holland, B. P., Beaumont.
Jackson, J. M., Port Arthur.
Jones, W. H., Moran.
*Kolb, A. C., Port Arthur.
Ledbetter, L. H., Beaumont.
Mabry, Frank D., Port Arthur.
Mann, D. A., Beaumont.
Mann, James S., New Willard.
Martin, John D., Beaumont.
Martin, F. S., Beaumont.
Matlock, E. W., Port Arthur.
McAlister, Finis E., Wiergate.
McMicken, Dru, Beaumont.
Middleton, W. C., Beaumont.
Mills, E. D., Beaumont.
Orrill, R. Ray, Port Arthur.
Pedigo, H. B., Beaumont.
Pollock, A. S., Port Arthur.
Powell, L. C., Beaumont.
Reagan, J. H., Beaumont.
Record, Joe Beaumont.
*Reed, Guy H., Beaumont.
Reed, Pat, Port Arthur.
Richardson, B., Beaumont.
Roark, A. W., Saratoga.
Sappington, T. B., Port Arthur.
Selman, T. B., Silsbee.
Serafino, L. C., Beaumont.
Sherrell, E. A., Beaumont.
Smith, J. G., Port Arthur.
Swearingen, M., Port Arthur.
Swonger, J. Boyd, Beaumont.
Tadlock, J. T., Dayton.
*Tatum, W. E., Beaumont.
Thompson, J. D., Port Arthur.
Thomson, W. F., Beaumont.
Vaughan, B. H., Port Arthur.
Vaughan, E. W., Port Arthur.
Wall, S. D., Port Arthur.
*Wier, D. S., Beaumont.
Welch, J. G., Port Neches.
White, C. M., Beaumont.
White, J. M., Port Arthur.
Winters, Harold A., Port Arthur.
Winters, W. S. Jr., Port Arthur.
Winters, W. S. Sr., Port Arthur.
Wood, B. W., Port Arthur.
Young, I. T., Port Arthur.
Young, T. W., Port Arthur.
Young, Warren G., Port Arthur.

NACOGDOCHES COUNTY MEDICAL SOCIETY.

Barham, Geo. S., Nacogdoches.
*Blackwell, Thos. J., Nacogdoches.
Castleberry, Wm. T., Nacogdoches.
Ford, Francis C. (Pres.), Nacogdoches.
Howard, W. C., Appleby.
Nelson, Albert A., Nacogdoches.
Payne, C. M., Nacogdoches.
Pennington, T. J., Nacogdoches.
P'Pool, M. W. (Sec.), Nacogdoches.
Samuels, Geo. E., Appleby.
Smith, W. I. M., Nacogdoches.
Tucker, F. R., Nacogdoches.
Lockey, R. P., Nacogdoches.

ORANGE COUNTY MEDICAL SOCIETY.

*Barr, R. E., Orange.
*Coyle, W. P., Orange.
Dameron, J. H., Orange.
*Lawson, F. W. (Sec.), Orange.
Mitchell, A. L., Orange.
Pearce, A. G., Orange.
Phillips, C. E., Orange.
Reeves, J. E. (Pres.), Orange.
*Seastrunk, J. C., Orange.
*Sholars, S. W., Orange.
Slay, I. J., Texla.
Smith, J. R., Orangefield.
Wilhite, G. W., Orange.
*Yates, J. D., Orange.

SABINE COUNTY MEDICAL SOCIETY.

Arnold, W. T. (Pres.), Hemphill.
Cousins, R. D. (Sec.), Pineland.
Morgan, T. B., Bronson.
Smith, C. F., Hemphill.
Smith, E. G., Hemphill.

SHELBY COUNTY MEDICAL SOCIETY.

Bailey, Sydney L., Center.
Bryan, Clarence O., Center.
Calhoun, Thos. G., Tenaha.
Carter, Caleb E., Tenaha.
Clements, Peyton C., Center.
Duke, Andrew W. (Pres.), Center.
Foster, E. N., Center.
*Hurst, Thos. L., Center.
Ramsey, William A., Joaquin.
Warren, Wm. H. (Sec.), Center.
Warren, Walter M., Center.
Whiteside, Thomas F., Timpson.
Windham, John H., Shelbyville.
Windham, William C., Center.

ELEVENTH OR EASTERN DISTRICT.

Dr. R. H. McLeod, Palestine, Councilor.

ANDERSON COUNTY MEDICAL SOCIETY.

Austin, M. L., Montalba.
Card, Chas. F., Palestine.
Converse, E. V., Palestine.
Dunn, R. M., Palestine.
Funderburk, W. O. (Pres.), Elkhart.
Hatchcock, A. L., Palestine.
Howard, G. R., Austin.
King, M. A., Frankston.
Link, E. W., Palestine.
*Link, H. R., Palestine.
McLeod, R. H. (Sec.), Palestine.
*Parsons, E. B., Palestine.
*Rose, E. L., Palestine.
Scarborough, E. H., Brushy Creek.
*Small, Guy D., Palestine.
Speegle, A. A., Palestine.

CHEROKEE COUNTY MEDICAL SOCIETY.

Barnett, G. W., Gallatin.
Barron, W. P., New York City.
Bone, J. N., Jacksonville.
*Canon, M. B., Jacksonville.
Castner, C. W., Rusk.
Cobble, Thos. H. (Sec.), Rusk.
DuBose, J. L., Wells.
Ely., J. J., Jacksonville.
Fuller, F. A., Jacksonville.
Greenwood, J. T., Ponta.
*Johnson, J. F., Rusk.
Jones, E. P., Dialville.
Lockhart, J. J., Rusk.
McDougle, J. B., Jacksonville.
McClure, M. E., Alto.
McDonald, W. A., Alto.
Moseley, E. M., Rusk.
Maness, F. G., Rusk.
Moore, J. W., Dialville.
Priest, R. C., Rusk.
Rather, S. S., Jacksonville.
Ramsey, J. B., Forest.
Tabb, T. E., Waco.
Travis, J. M., Jacksonville.
*Travis, R. T., Jacksonville.
Turner, R. G., Fastrill.
Yates, F. P. (Pres.), Rusk.

FREESTONE COUNTY MEDICAL SOCIETY.

Bond, J. W. (Pres.), Donie.
*Davidson, J. D. (Sec.), Teague.
Harrison, W. P., Teague.
Headlee, E. V., Teague.
Lowery, D. L., Teague.
*McFadin, W., Fairfield.
*Peyton, F. P., Teague.
Whiteside, W. A., Kirvin.

HENDERSON COUNTY MEDICAL SOCIETY.

Baugh, J. F., Chandler.
Cockrell, L. L., Eustace.
*Easterling, A. H. (Sec.), Athens.
Fowler, J. A., Malakoff.
Hodge, J. C., Athens.
Hodge, R. H., Athens
Horton, A. C., Murchison.
Jeter, D. O., Murchison.
LaRue, R. L., Nacogdoches.
Moon, G. F. (Pres.), Chandler.
*Moss, M. M., Brownsboro.
*Owen, D. B., Malakoff.
Price, D., Athens.
Pulley, L. W., Trinidad.
Summers, W. C., Athens.
Wallace, B. C., Athens.
*Webster, J. K., Athens.

HOUSTON COUNTY MEDICAL SOCIETY.

Barclay, B. R., Ratcliff.
Blount, R. T., Lovelady.
Collins, W. B., Lovelady.
Deal, J. B., Crockett.
*Dillard, R. E. (Sec.), Crockett.
Evans, C. W., Crockett.
Hill, C. C., Grapeland.
Kennedy, Sam, Grapeland.
*Latham, W. W., Crockett.
Lipscomb, W. C., Crockett.
McCall, H. L., Ratcliff.
Sherman, T. M. (Pres.), Kennard.
Stokes, E. B., Crockett.
Thomas, M. A., Crockett.
Wootters, J. S., Crockett.

LEON COUNTY MEDICAL SOCIETY.

Bell, J. F., Oakwood.
Bing, R. E., Oakwood.
Boggs, E. O., Spring.
Brown, S. M., Keechi.
Carrington, D. C. (Sec.), Marquez.
*Carter, Coleman Jr., Oakwood.
Cole, W. A., Normangee.
Downs, H. E., Batson.
Hester, J. B., Buffalo.
*Hester, Nell M., Buffalo.
Lacey, Robt., Buffalo.
Murdock, E. P., Oakwood.
*Powell, E. P., Centerville.
Rogers, Joe, Normangee.
Seale, W. H. (Pres.), Marquez.
Smith, W., Oakwood.
*Spruiell, Z. J., Jewett.

PANOLA COUNTY MEDICAL SOCIETY.

Anderson, T. E. (Pres.), Carthage.
Baker, A. M. (Sec.), Carthage.
Comer, C. C., Carthage.
*Daniels, J. A., Carthage.
Hull, C. F., Carthage.
Neal, J. S., Carthage.

RUSK COUNTY MEDICAL SOCIETY.

Birdwell, J. A., Overton.
Dawson, C. A. (Sec.), Minden.
*Deason, G. A., Garrison.
Deason, T., Mt. Enterprise.
Motley, John, Henderson.
Richardson, D. P., Henderson.
Ross, J. E., Henderson.
Ross, Griff, Mt. Enterprise.
Sadler, J. G., Henderson.
Shaw, C. A., Pine Hill.
*Shaw, Rube, Henderson.
Smith, A. O. L., Henderson.
Spivey, J. H., Henderson.
Watkins, J. E. (Pres.), Henderson.
White, W. P., Henderson.

SMITH COUNTY MEDICAL SOCIETY.

Arthur, B. L., Lindale.
Baldwin, A. P., Tyler.
Bell, Frank, Tyler.
Bell, G. G., Tyler.
Braly, B. D., Troup.
Brogan, W. P., Tyler.
Bryant, B. T., Tyler.
Bundy, D. T., Tyler.
Cain, W. R., Tyler.
Chambers, B. F., Tyler.
Clark, C. B., Troup.
Clawater, E. W., Tyler.
Callaway, A. N., Tyler.
Gibson, J. W., Lindale.
Griffith, J. M., Tyler.
Hudson, C. L., Tyler.
Hodges, Will, Tyler.
Johnson, W. J., Tyler.
Livingston, J. J., Tyler.
Pabst, Oscar C., Tyler.
Page, Roy L. (Sec.), Tyler.
Pope, J. H., Tyler.
Pope, Irwin Jr., Tyler.
Rice, E. D., Tyler.
Smith, L. E., Tyler.
Thompson, T. W., Lindale.
Vaughn, E. H., Tyler.
Woldert, A., Tyler.
Wisdom, H. H. (Pres.), Tyler.

TRINITY COUNTY MEDICAL SOCIETY.

Barnes, Geo. R. (Pres.), Trinity.
Bradley, C. H. (Sec.), Groveton.
Briscoe, S. M., Trinity.
Devine, I. N., Groveton.
Evans, C. W., Alcedo.
Magee, W. J., Groveton.
Murphy, C. S., Groveton.

TWELFTH OR CENTRAL DISTRICT.

Dr. N. D. Buie, Marlin, Councilor.

BELL COUNTY MEDICAL SOCIETY.

*Ballard, A. E., Belton.
Barton, W. H., Temple.
Batte, Tom, Belton.
Blair, C. M., Waxahachie.
Boren, Edgar R. (Sec.), Belton.
*Brindley, G. V., Temple.
Brown, P. H., Temple.
Bunkley, T. F., Temple.
Burns, E. J., Belton.
*Chapman, M. L., Temple.
*Chernosky, W. A., Temple.
Crain, A. B., Belton.
*Denman, J. A., Brackettville.
Ellis, I. D., Troy.
*Etter, W. F., Rogers.
*Frazier, J. M., Belton.
Gambell, Wm., Belton.
Gober, O. F., Temple.
Gooch, J. M., Temple.
Griffin, I. A., Killeen.
Hamblin, C. H., Holland.
Harlan, W. J., Bartlett.
*Hudson, Taylor, Belton.
Jenkins, J. G., Temple.
*Johnson, J. B., Temple.
Jordan, D. W., Temple.
Kimmins, R. L., Temple.
Knight, Lee, Temple.
Lee, B. F., Temple.
*Longmire, V. M., Temple.
Mallard, R. S., Fort Worth.
Maloy, E. D., Temple.
Marsh, J. E., Temple.
*Mayo, S. L., Bishop.
*McCelvey, J. S., Temple.
*McDavitt, Bertha, Temple.
*McElhannon, M. P., Belton.
McLean, W. J., Temple.
*McReynolds, G. S., Temple.
Moon, A. E., Temple.
Nichols, C. V., Rogers.
Noble, R. W., Temple.
Pittman, J. W., Belton.
*Pollok, L. W., Temple.
*Potter, Claudia, Temple.
Power, C. L., Temple.
*Robinson, J. E., Temple.
*Scott, A. C. Jr., Temple.
*Scott, A. C. Sr., Temple.
Schwald, N. A., Killeen.
Sherwood, M. W., Temple.
Smith, W. H. (Pres.), Heidenheimer.
Stoeltje, E. C., Oenaville.
Simpson, C. M., Temple.
Sutton, R. S., Bartlett.
*Talley, L. R., Temple.
*Tittle, G. A., Temple.
Ward, W. P., Temple.
Watts, S. A., Pendleton.
*Wilson, R. T., Temple.
*Wood, D. L., Killeen.
*Woodson, J. M., Temple.

BOSQUE COUNTY MEDICAL SOCIETY.

*Alexander, J. H., Meridian.
Blankenship, W. W., Mosheim.
*Burnett, J. H. (Pres.), Kopperl.
Cate, C. C., Morgan.

*Jarrett, J. C., Valley Mills.
McNeill, W. T., Valley Mills.
*Murray, J. A., Walnut Springs.
Plunneke, Perry, Cranfills Gap.
Standefer, Fred W. (Sec.), Lubbock.

BRAZOS-ROBERTSON COUNTY MEDICAL SOCIETY.

*Alexander, S. J., Hearne.
Brittain, Edgar, Bremond.
Black, Jno. W. (Sec.), Bryan.
Cline, Wm. B. (Pres.), Bryan.
Connor, C. J., Franklin.
*Cummings, H. W., Hearne.
Curry, T. G., Franklin.
Ehlinger, R. B., College Station.
Gilson, F. J., Calvert.
Gilstrap, W. P., Wheelock.
Goodwin, J. N., Bryan.
Holman, J. C., Franklin.
Lee, Geo. F., Bryan.
Mondrick, A. L., Bryan.
Oliver, W. H., Bryan.
Parker, W. S., Calvert.
Searcy, C. A., Bryan.
Sims, B. U., Bryan.
Taylor, W. C., Calvert.
Vaughan, W. R., Calvert.

COMANCHE COUNTY MEDICAL SOCIETY.

*Chilton, P. H., Comanche.
Clemons, I. T., Comanche.
Davenport, O. H., Hasse.
Eargle, J. H., Lamkin.
*Gray, A. J., Comanche.
Gray, C. W., Comanche.
Hilley, W. M., Sidney.
Inzer, H. H., DeLeon.
*Lane, J. O., Comanche.
Moore, W. M. (Pres.), Sipe Springs.
Ory, C. W. (Sec.), Comanche.
Plemmons, J. T., DeLeon.
Self, J. E., DeLeon.
Thomas, L. B., Comanche.
Vineyard, A. E., Comanche.
Westbrook, W. J., Sipe Springs.

CORYELL COUNTY MEDICAL SOCIETY.

Bailey, R., Gatesville.
Baker, E. B., Gatesville.
Bellamy, C. L., Turnersville.
Brown, R. J. (Pres.), Gatesville.
Coston, G. M., Ireland.
Graves, Ed, Gatesville.
Hall, T. M., New Orleans.
Hamilton, J. H., Jonesboro.
Haynes, H. M. (Sec.), Gatesville.
*Homan, D. C., Oglesby.
Jordan, D. M., Oglesby.
King, F. B., Pearl.
Newland, W. B., Gatesville.
Raby, R. L., Gatesville.

ERATH COUNTY MEDICAL SOCIETY.

Barnett, H. N., Dublin.
Black, R. C., Stephenville.
Bryan, T. F., Dublin.
Cragwell, A. O., Stephenville.
*Cain, O. O. (Sec.), Dublin.
Gordan, J. B., Stephenville.
Gordan, T. M., Stephenville.
Keith, Uel, Thurber.
Langford, A. E., Stephenville.
Mulloy, N. T., Lingleville.
Musgroves, J. S., Idalou.
*Naylor, S. D., Stephenville.
Sessums, J. R. (Pres.), Dublin.
Shepherd, O. H., Morgan Mill.
*Yarbrough, E. E., Alexander.

FALLS COUNTY MEDICAL SOCIETY.

*Aycock, F. E., Rosebud.
*Barnett, J. H., Marlin.
Baxter, T. D., Chilton.
Beck, Emma, Marlin.
Bryson, J. G., Bastrop.
*Buie, N. D., Marlin.
Bundy, O. T. (Pres.), Marlin.
Burdick, H., Lott.
Garrett, H. S., Marlin.
Green, J. E., Kosse.
Hayes, M. A., Lott.
*Hornbeck, A. C., Marlin.
*Hutchings, E. P. (Sec.), Marlin.
Martin, J. E., Eddy.
*Mitchell, J. H., Kosse.
Munger, S. S., Marlin.
*Rice, S. P., Marlin.
Shaw, F. H., Marlin.
*Smith, Howard O., Marlin.
Smith, Leslie M., Marlin.
Streit, A. J., Marlin.
*Torbett, J. W., Marlin.
Torbett, O., Marlin.
Wallace, H. E., Reagan.
Ward, B. G., Marlin.
White, J. B., Marlin.
*Whitesides, R. B., Lott.
York, F. A., Marlin.

HAMILTON COUNTY MEDICAL SOCIETY.

Applewhite, H. L., Hamilton.
Beach, D. B., Hamilton.
Bolding, W. T., Hamilton.
Chandler, C. E., Hamilton.
Cleveland, C. C., Hamilton.
Currie, Jas. D. (Sec.), Hico.
*Durham, Chas. E., Austin.
Hall, Chas. M. (Pres.), Hico.
*Hartman, V. A., Hamilton.
Hooker, Robt. A., Hamilton.
Russell, Wm. E., Hico.
Snodgrass, W. A., Hamilton.
Tull, Raymond H., Cooledge.
*Williamson, A. T., Indian Gap.
Young, Samuel W., Hico.

HILL COUNTY MEDICAL SOCIETY.

*Armstrong, F. G., Hubbard.
Barnes, Livingston, Hubbard.
Boyd, James E., Hillsboro.
Buie, John, Hillsboro.
Campbell, C. C., Itasca.
Faulkner, C. F., Whitney.
Fuller, H. H., Hillsboro.
Gilbert, A. J., Hillsboro.
Jenkins, G. H., Bynum.
Mahaffey, H. A., Hillsboro.
Martin, John, Hillsboro.
McDonald, J. F., Hillsboro.
*McKown, J. S., Osceola.
McPherson, A. B., Hillsboro.
Miller, J. W., Hillsboro.
Montgomery, G. L., West.
Olive, Roy, Brandon.
Price, Sterling, Mertens.
Robert, J. J., Hillsboro.
Robison, D. K., Itasca.
Sammons, H. P., Hubbard.
Shoemaker, L. F., Hillsboro.
Sims, F. D., Abbott.
Smith, Ben C. (Sec.), Hillsboro.
Smith, E. G., Malone.
Speer, J. A., Itasca.
Spalding, J. W., Hillsboro.
Stephenson, H. H., Frost.
*Treat, W. F. (Pres.), Whitney.
Vaughan, B. H., Hillsboro.
Vaughan, Edwin, Hillsboro.
*Weir, Joe P., Covington.
*Woolsey, H. U., Penelope.
Woolsey, W. J., Penelope.

HOOD-SOMERVELL COUNTY MEDICAL SOCIETY.

Dabney, Thos. H. (Pres.), Granbury.
*Gandy, J. H. (Sec.), Lipan.
Jarrett, A. R., Granbury.
Lancaster, Gus N., Granbury.
Menefee, E. L., Granbury.
Morgan, E. H., Granbury.

JOHNSON COUNTY MEDICAL SOCIETY.

Alexander, W. P., Cleburne.
Anderson, C. C., Venus.
Ball, W. P., Cleburne.
Cummings, W. J., Alvarado.
Dennis, M., Cleburne.
Edgar, C. L., Cleburne.
Ezell, C. V., Cleburne.
Ezell, U. D., Cleburne.
Farrar, Mary, Dallas.
Garner, A. F., Grandview.
*Harris, R. L., Cleburne.
Honea, T. C., Cleburne.
Johnston, W. F., Cleburne.
Knox, M. T. (Pres.), Cleburne.
*Osborn, J. D., Cleburne.
McNairn, Spencer P., Burleson.
Pearson, J. I., Joshua.
Prestridge, B. G., Alvarado.
Roark, R. H., Cleburne.
Self, T. N., Cleburne.
Shultz, C. A., Alvarado.
Shytles, J. T., Fort Worth.
Smith, L. T., Rio Vista.
Stalcup, J. M., Cleburne.
Strickland, D., Cleburne.
Turner, B. H., Cleburne.
*Washburn, W. R. (Sec.), Cleburne.
*Yater, Lee, Cleburne.
Yater, T. F., Cleburne.

LIMESTONE COUNTY MEDICAL SOCIETY.

Baker, J. C., Kosse.
*Barnett, J. B. (Sec.), Thornton.
Brown, M. M., Mexia.
Brown, W. W., Groesbeck.
Cromean, R. E., Mexia.
Cox, J. W., Groesbeck.
Dorsett, D. H., Mexia.
Driver, J. S., Colledge.
Goolsby, Z. T., Mexia.
Hamm, E. F., Mexia.
Holton, B. F., Purdon.
Holton, T. J., Groesbeck.
Jackson, R. B. (Pres.), Mexia.
Leach, R. N., Big Hill.
Maxwell, H. C., Mexia.
McKinzie, C. P., Mexia.
Moore, J. Fain, Cooledge.
Oates, T. F., Mexia.
Strickland, M. L., Groesbeck.

MILAM COUNTY MEDICAL SOCIETY.

*Anderson, R. B., Thorndale.
*Barkley, T. S., Rockdale.
Coulter, H. T., Rockdale.
Crump, T. E., Rockdale.
*Denson, J. L., Cameron.
Denson, Thos. J., Cameron.
*Denson, W. A., Benarnold.
*Epperson, A. S., Cameron.
Fountain, Wm. J., Jones Prairie.
Lyon, W. H., Buckholtz.
Lawrence, E. L., Thorndale.
Monroe, D. E., Cameron.
Newton, W. R., Cameron.
Page, J. A. T., Winchester.
*Rischar, Edward, Cameron.
*Sapp, M. C. (Pres.), Cameron.
Sessions, I. P., Rockdale.
Taylor, G. B. (Sec.), Cameron.
*Terry, Wm., Thorndale.
Vanzant, T. G., Houston.
Wallis, R. W., Rockdale.
Young, J. Z., Buckholts.

McLENNAN COUNTY MEDICAL SOCIETY.

Adams, R. E., Waco.
Alexander, R. J., Waco.
Alexander, Boyd, Waco.
Alexander, R. B., Waco.
Anderson, J. F., Cooledge.
*Aynesworth, K. H., Waco.
Aynesworth, H. T., Waco.
Baker, M. D., Waco.
Baird, T. H., Otto.
Bell, R. B., Waco.
Bidelspach, W. C., Waco.
Blailock, H. F., Waco.
*Bowman, N. H., Waco.
Brannon, E. C., Waco.
Brooks, C. H., Waco.
Brown, J. B., McGregor.
Brown, R. C., Waco.
*Byron, D. T., Waco.
*Cannon, I. F., Mart.
Christoffer, O. T., Waco.
Cole, W. F., Waco.
*Colgin, I. E., Waco.
*Colgin, M. W., Waco.
Collins, C. E., Waco.
Collom, C. C., Mart.
Compton, W. J. Crawford.
Connally, W. P., McGregor.
*Connally, H. F., Waco.
Cooke, J. E., Mart.
Corbin, M. E., Post.
Craven, A. R., Waco.
*Crosthwait, W. L., Waco.
Curran, W. F., Waco.
Davis, C. W., Waco.
Dean, J. J., Waco.
*Dudgeon, H. R. (Pres.), Waco.
Earle, Hallie, Waco.
Eastland, Doyle L., Waco.
Elliott, O. C., Elm Mott.
Ferrell, J. R., Waco.

Foster, J. D., Reisel.
*Foscue, G. B., Waco.
Friedsam, S. A., Waco.
Gebhard, A. G., Waco.
Germany, H. J., Waco.
*Gidney, J. W., West.
Gillam, J. R., Mart.
*Goodall, C. L., Waco.
Gordon, R. A., Lorena.
Hale, J. W., Waco.
Harrington, J. T., Waco.
Hoke, H. E., Waco.
Huddleston, J. M., Waco.
*Jenkins, I. W., Waco.
Jones, S. R., Waco.
Jones, J. C., Waco.
Kee, J. L., Waco.
*Kirby, F. F., Waco.
Langford, M. L., Mart.
Langston, I. A., Waco.
Lanham, H. M., Waco.
Lattimore, J. E., Waco.
*Liddell, Geo. M., Waco.
Lovelace, Carl, Waco.
*Lowery, W. W., Leroy.
Lowery, M. W., Gatesville.
Lynch, C. P., Pendleton.
Magee, W. E., Bruceville.
Manney, J. E., Waco.
Maxfield, J. R., Waco.
McCormick, R., Waco.
*McCaulley, E. R., Moody.
McDonald, T. L., Marlin.
Milam, E. A., Waco.
Miller, Garnett, Moody.
Minnock, R. F., Waco.
Murphy, Paul C., Waco.
Nail, W. R., Crawford.
Payne, L. S., Eddy.
Pope, F. M., West.
Quay, J. E. (Sec.), Waco.
*Rayburn, C. E., Waco.
Reese, C. H., Waco.
Roddy, L. H., Waco.
*Sadler, L. R., Waco.
Saunders, M. B., Waco.
Scott, B. L., Waco.
Smith, Edward, Waco.
*Smith, C. E., Mart.
*Souther, W. L., Waco.
Spillman, E. B., Waco.
Stanislav, F. J., Waco.
Thomas, J. H., West.
Trice, W. G., Axtell.
Wedemeyer, E. L., Waco.
*Wells, Cora V., Waco.
Wheeler, J. S., Waco.
Wilcox, Wallace, Bosqueville.
Wilkes, W. O., Waco.
Witte, W. S., Waco.
Witt, J. M., Waco.
*Wood, W. A., Waco.
Wood, R. Spencer, Waco.
Woolsey, Fleta, Waco.
*Womack, J. H., Waco.
Zvesper, J. S., Schulenburg.

NAVARRO COUNTY MEDICAL SOCIETY.

Blair, J. C., Purdon.
Bowmer, O. C., Corsicana.
Bristow, W. C., Emhouse
Burnett, S H., Corsicana.
Carter, J. T., Rice.
Carter, W. W., Powell.
*Cross, W. D., Corsicana.
*Currie, D. B., Kerens.
*Curtis, R. C., Corsicana.
Daniel, J. S., Corsicana.
*David, J. W. (Sec.), Corsicana.
Dickson, J. R., Dawson.
Edgar, J. H., Richland.
Ellis, E. B., Streetman.
*Ellis, W. M., Blooming Grove.
Forrester, R. E., Corsicana.
Fountain, W. D., Corsicana.
*Halbert, W. W., Corsicana.
Hamil, D. B., Corsicana.
Hamilton, J. J., Eureka.
Hanks, M. L., Corbet.
Herring, W. D., Blooming Grove.
*Hill, B. W. D., Dawson.
Horn, Fred W., Wortham.
*Jester, Homer B., Corsicana.
*Jones, J. A., Corsicana.
*Kelton, L. E., Corsicana.
*Logsden, W. K., Corsicana.
Lowery, E. B., Blooming Grove.
McClung, J. E., Corsicana.
*McLendon, T. P., Corsicana.
McKean, J. C., Corsicana.
McMullan, H. R., Roane.
Matlock, Jno. W., Frost.
Miller, Dubart, Corsicana.
Miller, T. A., Corsicana.
Newton, E. H. (Pres.), Corsicana.
Norwood, E. P., Corsicana.
Roberts, E. H., Corsicana.
Rogers, J. O., Kerens.
*Rowe, K. W., Kerens.
Russell, P. S., Corsicana.
Russell, W. R., Purdon.
Sadler, T. B., Corsicana.
Sanders, A. D., Corsicana.
Sanders, Gurley H., Kerens.
Shell, W. T., Corsicana.
Sisk, J. Newton, Madison, Wis.
Slater, T. S., Corsicana.
Smith, J. J., Barry.
Sneed, K. W., Wortham.
*Stevens, J. C., Richland.
*Suttle, I. N., Corsicana.
Walker, W. H., Winkler.
Wills, T. O., Corsicana.
*McDaniel, W. O., Streetman.
Weir, W. C., Kerens.

THIRTEENTH OR NORTHWEST DISTRICT.

Dr. J. H. Caton, Eastland, Councilor.

BAYLOR COUNTY MEDICAL SOCIETY.

Bunkley, J. F., Seymour.
Johnson, C. E., Seymour.
Johnson, C. F., Seymour.
Lowry, R. K. (Sec.), Seymour.
McLemore, J. T., Round Timber.
Pistole, W. S., Seymour.
Ratliff, J. D., Seymour.
Richardson, J. A. (Pres.), Seymour.

CLAY COUNTY MEDICAL SOCIETY.

*Allison, J. A., Henrietta.
Arnold, C. K., Petrolia.
Carmen, E. M., Vashti.
*Crook, L. F. (Pres.), Bellvue.
Ferriss, J. H. (Sec.), Henrietta.
Greer, Albert, Henrietta.
Hilburn, R. E., Wichita Falls.
Jones, T. K., Amarillo.
Moffitt, J. E., Stanton.
Payne, E., Bluegrove.
Reed, H. L., Henrietta.
Vaughter, H. D., Byers.
Whitmire, J. D., Red Springs.

EASTLAND COUNTY MEDICAL SOCIETY.

Ball, D., Cisco.
Barker, H. M., Olden.
Blackwell, E. C., Gorman.
Blackwell, G. T., Gorman.
Brice, John H., Cisco.
Brittain, B. F., Putnam.
Brown, L. C., Eastland.
Buchanan, L. C. G., Ranger.
Carter, C. H., Eastland.
*Caton, J. H., Eastland.
Clark, F. E., Cisco.
Dill, J. R., Rising Star.
*Ferguson, R. C. (Pres.), Eastland.
Graham, E. L., Cisco.
Gregory, Jos. W. (Sec.), Cisco.
Griffin, J. E., Cisco.
Griswald, G. W., Cisco.
Hale, Charles, Cisco.
Holland, M. L., Ranger.
Howell, J. W., Cisco.
Irby, Alf., Cisco.
*Jackson, W. L., Ranger.
Johnson, J. L., Eastland.
Kuykendall, P. M., Desdemona.
Lauderdale, T. L., Ranger.
Lee, W. P., Cisco.
Logsdon, Harry A., Ranger.
McAdon, L. E., Ranger.
Ory, L. K., Desdemona.
Palmer, W. C., Ranger.
Patterson, Thos., Rising Star.
Payne, T. E., Eastland.
Payne, W. E., Cisco.
Pierce, T. L., Carbon.
*Richardson, S. C., Eastland.
Rush, R. H., Gorman.
*Scott, K. J., Cisco.
Shackelford, Jas. A., Ranger.
Simmons, J. W., Eastland.
Stackable, Jno. B., Ranger.
Stubblefield, M. L., Gorman.
Tanner, H. B., Eastland.
Terrell, Cabe A., Ranger.
Townsend, E. R., Eastland.
Wier, A. K., Ranger.
Wilson, Carl, Ranger.

JACK-YOUNG COUNTY MEDICAL SOCIETY.

*Boyd, F. M., Luling.
*Duncan, R. A., Graham.
Gant, C. B., Graham.
Griffin, H. E., Graham.
*Hamilton, Geo. B., Olney.
Harrell, F. S., Olney.
Hughes, E., Bryson.
Locker, S. B., Jacksboro.
McCloud, T. C., Graham.
McClure, C. C. (Pres.), Jacksboro.
McKinney, H. C., Olney.
Padgett, W. O., Graham.
Wiggins, L. E., South Bend.
Winstead, D. E. (Sec.), Graham.
Winstead, L. A., Jermyn.
Woods, Jno. E., Perrin.
Woods, L. B., Jacksboro

KNOX-HASKELL COUNTY MEDICAL SOCIETY.

Cadenhead, J. F., Weinert.
Edwards, T. S. (Sec.), Knox City.
*Farrington, W. P., Munday.
Gossett, J. I., Rule.
Hammonds, J. E., Munday.
Heard, E. F., Goree.
Howell, W. J., Rochester.
Masters, W. J., Knox City.
Rogers, M. W., Rule.
Smith, A. A. (Pres.), Munday.
Taylor, W. M., Goree.

PARKER-PALO PINTO COUNTY MEDICAL SOCIETY.

Beeler, B. R., Mineral Wells.
Brown, J. D., Arlington.
Chandler, J. N., Weatherford.
Dick, N. E., Millsap.
Eastland, J. H., Mineral Wells.
Evans, A. J., Mineral Wells.
Garman, J. F., Mineral Wells.
*Garrett, A. S. (Pres.), Weatherford.
Lasater, W. B., Mineral Wells.
Law, C. B., Mineral Wells.
Leach, H. F., Weatherford.
Leach, A. F., Wichita Falls.
MacNally, Chas., Weatherford.
*McCorkle, J. H., Gordon.
*McCracken, J. H., Mineral Wells.
*Mincey, J. N., Mineral Wells.
Pedigo, W. S., Strawn.
Pyle, J. N., Mineral Wells.
*Roberts, L. C., Mineral Wells.
Rowley, E. A., Strawn.
Simmons, P. R., Weatherford.
Simmons, W. L., Breckenridge.
Smith, R. H., Palo Pinto.
Thompson, M. (Sec.), Weatherford.
Wagley, H. F., Mineral Wells.
Williams, C. B., Mineral Wells.
*Woods, D. R., Weatherford.
Yeager, R. L., Mineral Wells.
Yeager, E. F., Mineral Wells.

STEPHENS COUNTY MEDICAL SOCIETY.

Bryan, G. T. L., Caddo.
*Buchanan, E. B., Albany.
Burns, Wm. A., Moran.
*Cartwright, H. H., Breckenridge.
Collins, J. D., Caddo.
*Cupp, C. D., Breckenridge.
French, J. P., Breckenridge.
Gray, R. W., Breckenridge.
Guinn, W. B. (Pres.), Breckenridge
Hancock, E. A., Breckenridge.
King, J. E., Breckenridge.
Kessler, Calvin M., Breckenridge.
Lindley, O., Breckenridge.
Nelson, J. A., Eliasville.
Ramming, H., Breckenridge.
Smart, R. D., Breckenridge.
*Swinney, B. A., Breckenridge.
Turner, C. A., Woodson.
Webb, W. T., Breckenridge.
*Wharton, J. W., Breckenridge.
Wood, G. C., Breckenridge.

Youngblood, D. J. R. (Sec.), Breckenridge.
*Wray, P. C., Parks.

WICHITA COUNTY MEDICAL SOCIETY.

*Adams, W. B., Burkburnett.
Atkinson, Curtis, Wichita Falls.
Beckman, M. A., Wichita Falls.
Clark, Frank, Iowa Park.
Clark, G. G., Iowa Park.
Collard, F. R., Wichita Falls.
Collins, B. R., Wichita Falls.
Cramer, S. E., Electra.
Fletcher, J. H., Wichita Falls.
Gill, J. M. F., Burkburnett.
*Glover, M. H. (Pres.), Wichita Falls.
*Graham, R. H., Wichita Falls.
Guest, J. C. A., Wichita Falls.
*Hall, J. D., Wichita Falls.
Hampshire, G. H., Wichita Falls.
Hargrave, R. L., Wichita Falls.
*Hartsook, C. R., Wichita Falls.
Heyman, J. A., Wichita Falls.
Howser, J. P., Wichita Falls.
*Jones, Everett, Wichita Falls.
Keil, O. B., Wichita Falls.
*Kimbrough, O. T., Burkburnett.
Lane, A. L., Wichita Falls.
Ledford, H. P., Wichita Falls.
Lee, Q. B., Wichita Falls.
Lowry, W. P. (Sec.), Wichita Falls.
Mackechney, L., Wichita Falls.
McClory, A., Wichita Falls.
McCurdy, T. C., Archer City.
Monroe, C. W., Electra.
Nail, J. B., Wichita Falls.
*Ogden, W. H., Electra.
*Parmley, T. H., Electra.
Parker, W. L., Wichita Falls.
Parnell, L. D., Wichita Falls.
*Patillo, A. D., Wichita Falls.
*Powers, J. W., Wichita Falls.
Prichard, H. D., Wichita Falls.
*Reeves, D. H., Burkburnett.
Shepherd, F. D., Electra.
Smith, R. C., Wichita Falls.
*Stevenson, C. W., Wichita Falls.
*Stripling, L. F., Wichita Falls.
Terrell, A. P., Wichita Falls.
Tyson, W. S., Wichita Falls.
Van Cleave, H. S., Burkburnett.
*Walker, M. M., Wichita Falls.
West, A. W., Wichita Falls.
*White, F. S., Wichita Falls.
Wilson, O. W., Wichita Falls.
Wolford, R. B., Wichita Falls.

WILBARGER COUNTY MEDICAL SOCIETY.

Dodson, James E. Jr., Vernon.
Flaniken, Barton D., Vernon.
Garland, Alexander B., Vernon.
Hix, Richard W. (Sec.), Vernon.
King, Thomas A., Vernon.
Moore, Milton J., Vernon.
Moore, William R., Vernon.
Parrish, Minnie O., Gainesville.
Reger, Howard (Pres.), Vernon.
Rhoads, Henry H., Vernon.

FOURTEENTH OR NORTHERN DISTRICT.

Dr. A. B. Small, Dallas, Councilor.

COLLIN COUNTY MEDICAL SOCIETY.

Bounds, R. W., Prosper.
Brooks, P. F., Wylie.
Bryant, W. C., Anna.
*Burt, J. D., Farmersville.
Burton, E. L. (Pres.), McKinney.
Carpenter, J. D., Frisco.
Collins, J. S., Celina.
Compton, H. H., Allen.
Corry, A. C., Farmersville.
Davis, R. L., McKinney.
Erwin, J. C. Jr., McKinney.
Erwin, J. C. Sr., McKinney.
Grounds, B. F., Blue Ridge.
Hailey, E. L., Celina.
Harris, W. G., Plano.
Hicks, Jas. H., Josephine.
Houston, D. F., McKinney.
*Largent, Ben F., McKinney.
Largent, J. W., McKinney.
Manning, W. N., Richardson.
Mantooth, J. T., Altoga.
Mathers, W. R., McKinney.
*Metz, M. S., McKinney.
Morrow, R. E., McKinney.
Morrow, F. S., Blue Ridge.
Perry, M. O., Allen.
Robason, P. D. (Sec.), McKinney.
Saye, W. L., Frisco.
Verdier, R. A., McKinney.
Wolford, H. F., McKinney.
Wolford, W. F., Allen.
Wright, J. B., Westminster.
*Wysong, W. S., McKinney.

COOKE COUNTY MEDICAL SOCIETY.

*Baker, G. W., Era.
Clements, O. E., Gainesville.
Cunningham, W. W., Dexter.
Dudley, J. B., Muenster.
*Higgins, D. M., Gainesville.
Hughes, Chas. H., Gainesville.
Hughes Roy E., Gainesville.
Jeanette, J. C., Gainesville.
Johnson, C. R., Gainesville.
Kelley, W. N., Valley View.
*Kuser, Leroy W., Gainesville.
Maxwell, C. L., Myra.
Mead, E. C., Gainesville.
Murphy, J. H., Pilot Point.
Price, W. J. (Pres.), Gainesville.
*Roberson, I. N., Gainesville.
Smith, Carrie W., Gainesville.
Thayer, C. B., Gainesville.
*Wattam, J. M., Gainesville.
Whiddon, R. C. (Sec.), Gainesville.

DALLAS COUNTY MEDICAL SOCIETY.

Alexander, J. C., Dallas.
Andrews, B. C., Dallas.
Ard, Ben N., Dallas.
Aronson, E., Dallas.
Austin, J. L., Rockwall.
Austin, Florence, Dallas.
*Baird, R. W., Dallas.
Baker, W. T., Dallas.
Baldwin, J. B., Dallas.
Barton, R. M., Dallas.
Beall, Jno. R., Dallas.
Beddoe, R. E., Dallas.
*Bell, Marvin D., Dallas.
Bellamy, C. H., Dallas.
*Bettison, D. L., Dallas.
*Black, J. H., Dallas.
*Black, W. A., Dallas.
Bland, L. F., Dallas.
Block, Cecil, Dallas.
Blount, E. A., Dallas.
Boone, M. A., Dallas.
Boren, S. L., Dallas.
*Bourland, J. W., Dallas.
Boyd, Jno. M., Dallas.
Brandau, W. W., Dallas.
Brannin, E. B., Dallas.
Breihan, E., Dallas.
Brereton, G. E., Dallas.
Brewer, T. C., Dallas.
Brooks, E. J., Dallas.
*Brown, C. F., Dallas.
Brown, C. S., Dallas.
Browne, W. C., Dallas.
Bruton, E. B., Dallas.
Buford, Ben R., Dallas.
*Burnett, E. W., Carrollton.
Calhoun, J. S., Dallas.
Carlisle, Geo. L., Dallas.
Carnes, A. W., Hutchins.
Carnathan, W. G., Dallas.
*Carpenter, E. R., Dallas.
Carr, M. M., Dallas.
Carrick, M. M., Dallas.
Carroll, J. D., Dallas.
*Carroll, W. B., Dallas.
Carter, Chas. F., Dallas.
Carter, C. B., Dallas.
*Carter, D. W. Jr., Dallas.
Carter, Earl L., Dallas.
*Cary, E. H., Dallas.
Catto, C. G., Dallas.
Cecil, Howard L., Dallas.
Clay, Henry, Dallas.
Cobb, David H., Dallas.
Coble, J. M., Dallas.
Cole, R. K., Dallas.
Collier, Gates, Dallas.
Collins, A. G., Rockwall.
Cooke, Lane B., Dallas.
Cookerly, Van, Dallas.
*Copeland, H. V., Grand Prairie.
Corry, J. F., Rockwall.
Cowart, R. W., Dallas.
Crabtree, B. F., Dallas.
Cromwell, R. L., New York City.
Crook, W. J., Dallas.
Crow, W. E., Dallas.
Daniel, R. H., Dallas.
Davis, David B., Dallas.
*Davis, J. Spencer, Dallas.
Dawson, J. L., Dallas.
Dean, J. H., Dallas.
Deatherage, Wm., Dallas.
Deatherage, W. R., Dallas.
*DeBerry, M. W., San Antonio.
Decherd, H. B., Dallas.
Denton, Guy T., Dallas.
*Dickey, E. V., Dallas.
Donald, Homer, Dallas.
Doolittle, H. M., Dallas.
*Dorman, J. H., Dallas.
Downs, J. T., Dallas.
Driver, Sim, Dallas.
Duncan, Miles J., Dallas.
Dunlap, Elbert, Dallas.
DuPuy, Howard, Dallas.
Edwards, Wm. L., Dallas.
Ellis, L. C., Dallas.
Embree, J. W., Dallas.
*Estes, I. A., Dallas.
Fetzer, L. W., Dallas.
Finnegan, C. R., Dallas.
*Fisher, T. B., Dallas.
*Flynn, C. W., Dallas.
Flythe, A. G., Dallas.
Folb, Henry, Dallas.
Folsom, A. I., Dallas.
Ford, J. F., Dallas.
Fowler, W. W. (Sec.), Dallas.
Freed, Harold, Dallas.
Freedman, S. M., Dallas.
Garrett, H. Grady, Dallas.
*Gauldin, R. J., Dallas.
Gibbons, O. W., Dallas.
*Gilbert, A. Clay, Dallas.
Gilbert, D. W., Dallas.
*Gilbert, F. M., Irving.
*Gilbert, T. C., Dallas.
*Giles, R. B., Dallas.
Glass, R. J., Dallas.
Goggans, Roy, Dallas.
Gordon, E. S., Dallas.
Gosline, H. I., Dallas.
Greer, B. E., Dallas.
*Grigsby, C. M., Dallas.
Griffin, B. H., Dallas.
*Hackler, G. M., Dallas.
Hackney, U. P., Dallas
Hale, Wm. Jr., Dallas.
Haley, John, Irving.
Haley, Wm. E., Dallas.
Hamer, T. B., Richardson.
Hambleton, B. F., Dallas.
Hampton, J. A., Dallas.
*Hannah, C. R., Dallas.
Hanson, W. L., Dallas.
Harben, R. P., Dallas.
Harber, Harry P., Dallas.
Harder, Ira E., Dallas.
Hardin, Abell D., Dallas.
Hardin, Dexter H., Dallas.
Harral, Whitfield, Dallas.
Harrington, S. F., Dallas.
Hendricks, H. H., Houston.
*Herndon, J. H., Garland.
Hill, S. M., Dallas.
Holder, C. C., Dallas.
Holderness, J. R., Dallas.
*Hopkins, May Agnes, Dallas.
Howard, G. W., Dallas.
*Howard, Wm. E., Dallas.
Hudgins, B. E., Dallas.
Hudson, W. L., Dallas.
Irvine, E. J., Dallas.
Jablow, H. B., Dallas.
Jackson, C. M., Rockwall.
Jackson, Rice R., Dallas.
Jackson, Rueben W., Dallas.
Jacobson, H. B., Dallas.
Jamison, Cyrus, Dallas.
Jarmon, T. M., Dallas.
Jenks, R. W., Dallas.
Johnson, C. L., Dallas.
Jones, A. F., Mesquite.
Jones, I. G., Dallas.
*Jones, J. Guy, Dallas.
*Jones, W. D., Dallas.
Keller, L. L., Dallas.
*Keller, Roy L., Dallas.
Kindley, G. C., Dallas.
King, S. R., Dallas.
*Kinsell, B., Dallas.
*Knowles, W. Mood, Dallas.
Kolaczkowski, C. H., Dallas.

*Lehman, Jno. R., Dallas.
Levy, H. R., Dallas.
Lindsay, G. A., Dallas.
Lively, W. M., Dallas.
Loomis, E. W., Dallas.
*Looney, W. W., Dallas.
*Lott, M. E., Dallas.
Love, T. S., Dallas.
Luecke, P. E., Dallas.
*Lynch, K. M., Dallas.
*Maffett, Minnie L., Dallas.
*Mahon, G. D., Dallas.
*Marchman, O. M., Dallas.
*Marshall, J. H. Dallas.
*Martin, C. L., Dallas.
*Martin, J. M., Dallas.
Massey, W. E., Dallas.
Mathews, Paul W., Dallas.
Matthews, A. A., Dallas.
Maupin, W. A., Rowlett.
*McBride, R. B., Dallas.
McFarland, G. B., Dallas.
McGaffey, C. N., Dallas.
McGuire, J. H., Dallas.
McIver, Julius, Dallas.
*McLaurin, Hugh, Dallas.
McLaurin, J. G., Dallas.
McLeod, J. N., Dallas.
*McReynolds, Jno. O., Dallas.
*Michie, O. C., Dallas.
Miller, Tate, Dallas.
Milliken, Gibbs, Boston, Mass.
*Milliken, S. E., Dallas.
Millwee, R. H., Dallas.
*Moore, H. Leslie, Dallas.
Morgan, F. B., Dallas.
Morris, G. E., Dallas.
Morris, I. J., Dallas.
*Moursund, W. H., Dallas.
Murchison, D. R., Dallas.
Myers, D. V., Dallas.
Nance, L. M., Dallas.
Nash, A. W., Dallas.
*Nash, C. C., Dallas.
Neuman, Albert, Dallas.
Newton, F. H., Dallas.
Nichols, Jonah, Dallas.
Parks, A. J., Dallas.
Parks, C. C., Lancaster.
Payne, R. S., Dallas.
Peck, W. M., Dallas.
Pence, C. P., Dallas.
*Perkins, J. F., Dallas.
Pickett, W. F., Dallas.
*Pierce, F. A. (Pres.), Dallas.
*Pierce, J. L., Dallas.
Poe, J. G., Dallas.
Potts, James M., Dallas.
Poulter, J. W., Dallas.
Powell, Homer, Dallas.
Probert, W. H., Dallas.
Ratliff, H. L., Dallas.
Rea, Melvin O., Dallas.
Riddler, G. A., Dallas.
*Riddle, Penn, Dallas.
Robertson, J. A., Dallas.
Robinson, W. L., Dallas.
Rockett, F. W. B., Wichita, Kans.
*Rosser, Curtice, Dallas.
*Rosser, C. M., Dallas.
Rubenstein, Bernard, Dallas.
*Rushing, E. O., Dallas.
Ryon, J. H., Dallas.
Sacher, C. B., Dallas.
Samuell, W. W., Dallas.
Scanland, Viola P., Dallas.
Schaub, G. A., Dallas.
Schenewerk, G. A., Dallas.
Schamltz, W. F., Dallas.
*Schoolfield, Ben L., Dallas.
Schulze, E. C., Dallas.
Schuett, A. J., Dallas.
Seay, Dero E., Dallas.
*Seely, M. S., Dallas.
Shanks, R. C., Grand Prairie.
Shannon, Hall, Dallas.
*Shelmire, J. B., Dallas.
Shelton, A. M., Mesquite.
Short, R. F., Dallas.
Shortal, W. W., Dallas.
*Simpson, C. W., Dallas.
Small, A. B., Dallas.
Smart, J. H., Dallas.
*Smith, DeWitt, Dallas.
Smith, J. R., Dallas.
Smith, Ralph C., Dallas.
Smith, V. L., Dallas.
Smith, W. Edgar, Dallas.
Smoot, J. B., Dallas.
Sorrells, C. C., Dallas.
*Spangler, Davis, Dallas.
*Spence, R. C. Dallas.
Spradley, J. B., Dallas.
Standifer, C. H., Arlington.
Stephenson, J. H., Dallas.
Stephenson, W. O., Dallas.
Still, J. M., Dallas.
Stone, M. P., Dallas.
Strother, E. B., Dallas.
Stroud, E. F., Dallas.
Super, A. R., Dallas.
Sypert, J. R., Dallas.
*Taber, M. E., Dallas.
*Terrill, J. J., Dallas.
Terry, Jack S., Dallas.
Thaxton, G. B., Dallas.
*Thomasson, A. R., Dallas.
Thompson, L. S., Dallas.
Thornton, C. W., Dallas.
Tittle, L. C., Dallas.
Tomkies, J. F., Dallas.
Touchstone, J. L., Dallas.
Trumbull, R. A., Dallas.
*Turner, J. S., Dallas.
Uhler, Claude, Relay, Md.
*Underwood, Geo. M., Dallas.
Usry, R. S., Dallas.
*Van Duzen, R. E. Dallas.
Veal, Geo. T., Dallas.
*Walcott, H. G., Dallas.
Walker, P. M., Dallas.
*Walker, R. B., Dallas.
Warren, C. H., Dallas.
*Watkins, A. B., Seagoville.
Watson, C. E., Dallas.
Watson, J. T., Dallas.
Weaver, S. D., Dallas.
Webb, Sam J., Dallas.
Wells, J. T., Dallas.
White, C. V., Dallas.
*White, Edward, Dallas.
White, W. T., Dallas.
Whitis, Rufus, Dallas.
*Wilkinson, Albert, Dallas.
Winford, T. E., Dallas.
Williams, G. Raworth, Dallas.
Williams, T. S., Dallas.
Wilson, J. E., Lancaster.
*Winans, H. M., Dallas.
Witt, Guy F., Dallas.
*Woodard, T. L., Dallas.
Worley, J. R., Dallas.
Wright, R. E., Dallas.
Yancey, R. S., Dallas.
Young, J. C., Dallas.
*Young, W. M., Dallas.

DELTA COUNTY MEDICAL SOCIETY.

Barnett, Jas. M., Ladonia.
Blair, Samuel F., Cooper.
Chiles, Frank, Pecan Gap.
Darwin, Thos. M., Cooper.
DeWitt, Robert E., Cooper.
Estep, Marshall A., Lake Creek.
Forrester, Wm. H., Klondike.
Hearne, Wm. O., Enloe.
Janes, Olin Y., Cooper.
Lowry, David O. (Pres.), Cooper.
Morehead, Thos. R., Ben Franklin.
Taylor, C. Curtis (Sec.), Cooper.
Westerman, David B., Dallas.
Wheat, E. Baxter, Cooper.
Woodruff, Eugene E., Cooper.

DENTON COUNTY MEDICAL SOCIETY.

Allen, Joseph H., Justin.
Amos, H. C., Aubrey.
Archer, Cullin W., Lewisville.
Copenhaver, Jno. E., Aubrey.
Dobbins, Thos. C., Denton.
Evans, Rebecca M., Denton.
Franklow, C. D. (Pres.), Pilot Point.
*Fullingim, M. D. (Sec.), Denton.
*Harris, Thos. M., Pilot Point.
Herrick, Jessie L., Denton.
Hooper, Jno. L., Denton.
*Inge, J. M., Denton.
Kimbrough, W. C., Denton.
Kirkpatrick, D. F., Lewisville.
*Lain, Geo. D., Sanger.
Lipscomb, Priestly, Denton.
*Martin, M. L., Denton.
Rice, Jno. C., Sanger.
Roark, J. W., Roanoke.
Rowe, Hill, Denton.
*Stover, J. E., Truscott.

ELLIS COUNTY MEDICAL SOCIETY.

Adamson, F. R., Waxahachie.
Blind, Chas. A. (Sec.), Waxahachie.
Boyd, W. D., Waxahachie.
Campbell, W. E., Ennis.
Carlisle, F. H., Italy.
Clark, L. E., Ennis.
*Cook, C. P., Ennis.
Cox, A. J., Ennis.
Daly, T. J., Palmer.
Donnell, Herbert, Waxahachie.
Forehand, J. F., Bardwell.
Germany, J. W., Ennis.
*Gilcreest, J. E., Ennis.
Graham, L. H., Waxahachie.
Grant, W. A., Bardwell.
*Gray, C. E., Ennis.
Hall, R. L., Italy.
Hampton, A. T., Ferris.
Harris, J. P., Midlothian.
*Hastings, M. E., Waxahachie.
House, E., Ferris.
Jackson, W. B., Waxahachie.
Jenkins, F. H., Waxahachie.
Jenkins, J. B., Waxahachie.
Jenkins, W. M., Waxahachie.
Jones, J. E., Waxahachie.
Killian, J. E., Milford.
McBurnett, C. W., Palmer.
McCall, R. A., Ennis.
McCall, W. P., Ennis.
Moore, N. L., Palmer.
Munroe, R. M., Milford.
Pickett, N. J., Milford.
Poplin, R. W., Waxahachie.
Rains, J. L., Ennis.
Stoker, G. P., Red Oak.
Story, Fred L., Ennis.
Sweatt, O. P., Waxahachie.
*Tenery, W. C., Waxahachie.
Terry, J. S., Ennis.
Thomas, A. L., Ennis.
Thompson, D. G., Waxahachie.
Thornton, Z. N., Forreston.
Tibbs, R. I., Maypearl.
Wadley, S. L., Palmer.
*Watson, S. H. (Pres.), Waxahachie.
Weeks, W. B., Maypearl.
West, W. F., Waxahachie.
Wills, J. F., Ferris.

FANNIN COUNTY MEDICAL SOCIETY.

Adair, C. C., Bailey.
*Alexander, W. H., Floydada.
Carleton, J. C., Bonham.
Cooper, W. A., Windom.
*Cappleman, J. J., Honey Grove.
Davis, R. C., Bonham.
Dunsworth, O. C., Trenton.
Donaldson, H. H., Honey Grove.
Fry, S. D., Ladonia.
Gill, J. J., Dodd City.
Gray, C. A., Bonham.
Hampton, N. D., Ector.
*Joiner, J. C., Honey Grove.
Jones, A. C., Leonard.
Kennedy, A. B. (Pres.), Bonham.
Knight J. T., Ravenna.
Leeman, H. H., Windom.
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*Woodward, L. O., Fort Worth.
Woodward, M. L., Fort Worth.
*Woodward, S. A., Fort Worth.
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Echols, Mathew H., Wills Point.
Fry, Harry T., Wills Point.
Gray, Robert L., Ben Wheeler.
Garland, Wiley L., Grand Saline.
Hearin, Williard C., Canton.
Hilliard, Horace H., Canton.
Jeter, John J., Canton.
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Shoemaker, Leonard L., Canton.
Williams, Clarence R., Wills Point.

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Vol. XX **July 1924** **No. 3**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

For Whom Shall We Vote?—It seems to us that the doctor has a double civic duty in the field of politics. He is interested, as all good citizens should be, in all problems which pertain to government, in addition to which he has peculiar and almost exclusive knowledge of medical and public health matters, than which there are no questions of more importance to state and municipal governments. It is unfortunate that the doctor has so largely assumed an air of indifference, if not superiority, to all things political. We can account for his failure to fully discharge his political obligations only on the ground of preoccupation or fear of offending. In this connection, we might point to the fact that those who would be offended because the doctor pronounces himself on public health and medical questions, would not be his friends anyway. He really has nothing to lose. No good citizen can afford to be too busy to vote, and vote right. Indeed, he should feel it his privilege and his burden to spread the gospel of good government, as he sees it, whenever opportunity offers.

The present political situation is of extreme importance. The question of public health is before the public. The people are being told that we would have them take charge of health matters, and that they should see that only those candidates for office in the legislative, executive and judicial branches of the government, are elected, who are interested in such problems and who will view them in a sensible, orthodox manner. If at this time the medical profession is not active in pointing the way, the public will assume that our activities are perfunctory and our talk just ordinary propaganda. We may vote our convictions when the time comes, but our vote is of less importance than our influence properly exerted. No one ever accomplishes a great deal by merely voting.

Just now, the enemies of beneficial medicine and public health legislation are displaying unusual activities. It is not practicable to discuss these activities at this time. Perhaps it will be sufficient to quote the following questionnaire, put out by the chiropractors, evidently to all candidates for the Legislature, and for other offices that count:

"Believing, as we think you do, that the public is entitled to know the opinion of all those seeking public office, on matters of public concern, we are submitting to you as a candidate for State Senator of the great State of Texas, questions for your consideration as a matter of vital concern and that will be a 'live' issue at the next session of the Texas Legislature. We feel that we shall receive a frank reply to same:

"1. Do you believe in the science of chiropractic?

"2. Would you favor a law regulating the practice of chiropractic: one that protects the public and restricts the chiropractor to the practice of their profession and does not infringe upon any other profession?

"3. Would you favor a law with standards equal to those of twenty-seven other states that have already made chiropractic legal?

"4. Would you favor a law that gave to the chiropractic profession their own board of examiners; said board to be composed exclusively of chiropractors and be maintained by the State from fees and dues collected from the chiropractic profession and applicants to practice?"

Of course, it is all perfectly silly and has the earmarks of being an amateur effort. It

does not sound like the astute politician whom we have understood is in charge of the legislative interests of this particular group of offenders against our Medical Practice Act and the good health of our people. There is either a trick in it, or else the chiropractors are trying to play the political game without the expert advice they usually have.

The Council on Legislation and Public Instruction has endeavored to ascertain the views on public health problems of those candidates for office in whom the medical profession may be interested on a statewide basis. County society legislative committees must be depended upon to determine the views of candidates for the Legislature. The following propositions have been used by the Council—it is suggested that they be used by county societies (contrast them with the chiropractors' questionnaire):

"1. Revision of the public health laws, to the end that the Health Department may operate efficiently and economically. It is felt at this time that the most sensible way to bring about this condition of affairs is to provide for a Board of Health with interlocking terms of office and sufficient power to control health conditions, the State Health Officer to be an employee of the Board.

"2. Adequate provision for the care and treatment of our insane. It is believed that if a law may be devised which will provide for a psychopathic hospital, for the observation, diagnosis and treatment of those believed to be insane, to which commitment may be both on a volunteer and compulsory basis, many otherwise hopelessly insane may be returned to useful and safe citizenship, the residue going to the so-called insane asylums for incarceration and humane care.

"3. Maintainence of the present system of a single standard of educational requirements for all who would practice medicine, no matter after what so-called school or system of practice, is considered a public health problem of supreme importance. An effort will doubtless be made to secure separate boards for those who disagree with the facts of science as pertain to the practice of medicine. Such a system is held by us to be not only dangerous to the public health but unconstitutional as well. It is an imposition on the medical profession to require constant contention against serious efforts of this sort. The medical profession cannot evade the issue and stand from under the responsibility of protecting the public against unwisdom of this sort."

Those who react in an unsatisfactory manner when approached along these lines should be opposed. It should be borne in mind that the record of those who have heretofore been in the Legislature and the attitude of as many as we have been able to get an expression from, who are now candidates, are on file with the State Secretary, and will be immediately available upon request by letter, telephone or telegraph. Legislators who voted for the final passage of the Medical Practice Act amendment last year claim to have helped pass that law. Such is not the case altogether. If a legislator voted to exempt chiropractors or christian scientists from the law, he was against it, no matter whether he subsequently voted for it or not. The view of the Legislative Council on certain candidates for state office, as heretofore promised, follows:

How the Candidates Stand.—The Council on Legislation and Public Instruction authorizes the publication of the following, relating to the attitude of those candidates for office in whom the medical profession should be interested on a statewide basis:

FOR GOVERNOR.

Each candidate for Governor received a letter from the Council, requesting his attitude on the three points mentioned in the preceding editorial, with the following results:

General Thomas D. Barton of Austin, the present Adjutant General, replied very satisfactorily. We quote three paragraphs from his letter:

"There is no department of the State government which is more closely connected with the welfare of Texas people than the State Health Department, and no department should be further removed from political disturbance, yet it is well known that such has not been the case in the past. The plan proposed by your Association providing for a Board of Health, to be composed of the most able medical men to be found in the State, serving with interlocking terms of office and having authority to fix public health policies of the State and to employ the State Health Officer, would, I believe, go far toward removing the Health Department from politics.

"About the only class of institutions in the State which never has a lobby to take care of its interests are the eleemosynary institutions. No one interests himself in the condition of the Insane Asylums, the School for the Blind, Deaf and Dumb, the Epileptic Colony, the Tuberculosis Sanatorium, the Feebleminded, etc. The condition of the insane in Texas is nothing short of a crime. Almost every jail in

Texas has some of these poor unfortunates, being held for someone to die to make room for more. I promise you that if I am elected your Governor this condition will be relieved, or there will be no appropriation for any other purpose signed. I will do the lobbying for the Eleemosynary Institutions myself. This is one debt the State owes and cannot dodge, and it shall be paid if I am elected your Governor.

"In the matter of the public health, I stand committed to the unqualified observance of the principles laid down in scientifically proven medicine. Theories do not appeal to me in the face of proven facts. I believe thoroughly in an educated medical profession, in the matter of private practice, and in the prevention of disease. It is my conviction that those who would assume the serious responsibiltiy of practicing medicine should be thoroughly educated in the basic facts of medicine. I do not consider it the business of the State to determine how the individual shall make application of the knowledge thus gained, or under what banner he shall march in the parade. I shall look upon the legalized medical profession of this State much as a student would look upon his library; as an institution to be consulted and considered at all times, and followed when the advice thus gained appears to be wise."

Senator Joe Burkett of Eastland, failed to reply directly to our letter. However, his county medical society officially endorsed him, and his record in both the House and the Senate has heretofore been highly satisfactory, so far as it relates to medical and public health matters. Indeed, he was generally accounted the staunch friend of standardized medicine and practical public health. His record as District Judge, before his election to the Legislature, was satisfactory. His medical friends are enthusiastically supporting him.

Honorable V. A. Collins of Dallas, did not reply to our letter, neither did he reply to letters from other sources, which were inspired by us. We feel that we have made every reasonable endeavor to ascertain his views, and that his silence gives consent to the rumor that he is not favorable to the contentions of the medical profession in the interest of the public health.

Honorable Lynch Davidson, formerly Lieutenant-Governor, and before his election to that high office, a member of the Senate, has served the public health interests of his State satisfactorily. As presiding officer of the Senate he had an opportunity to declare himself in no unmistakable terms. When the first effort was made, in the Thirty-seventh Legislature, to perfect the Medical Practice Act, he voted off the tie on the christian science exemption amendment, in favor of our contentions that there should be no exemptions from the law for those who would practice medicine or any part of it. The following is quoted from his letter:

"(1). Revision of the public health laws, to the end that the Health Department may operate efficiently and economically.—I, of course, am in favor of a revision of the laws, if so revised as to make the Health Department operate more efficiently and economically. In the same question you say, 'that at this time the most sensible way to bring about this condition of affairs is to provide for a Board of Health with interlocking terms of office and sufficient power to control health conditions, the State Health Officer to be an employee of the Board.' Frankly, there is new thought in this question, and in the brief time it has been before me, I am unable to consider it sufficiently to enable me to give an answer. In fact, I should want to discuss the matter from various angles with people interested before stating my conclusion.

"(2). You say, 'It is believed that if a law may be devised which will provide for a psychopathic hospital, for the observation, diagnosis and treatment of those believed to be insane, to which commitment may be both on a volunteer and compulsory basis, many otherwise hopelessly insane may be returned to useful and safe citizenship, the residue going to the so-called insane asylums for incarceration and humane treatment.' My platform shows that I have in mind adequate and ample care of the insane of Texas, and I propose a plan by which the facilities may be provided. My platform does not go into the question of voluntary and compulsory commitment. However, I see no objection to a program of both voluntary and compulsory commitment. The program of providing buildings and facilities outlined in my platform would, of course, care for the whole situation in that respect. The inadequacy of our insane facilities is the crowning disgrace of Texas today. I am making that statement in every speech I have made in Texas, and suggesting remedies outlined in my platform. Your question, of course, goes more into detail. Naturally, I am in favor of any reasonable arrangement within the bounds of reasonable cost that will accomplish the things of transcendant importance, and that is to cure as many of the insane as possible and return them to useful and safe citizenship.

"Maintenance of the present system of a single standard of educational requirement for all who would practice medicine, no matter after what so-called school or system of practice, is considered a public health problem of supreme importance—I quote from my platform, which I believe fully answers this question: 'I am a firm believer in the principles that any men or women who set themselves up as practitioners, proposing to cure ailments of the

human race, should not be permitted to pursue their vocation unless it is a well established fact that they are competent to do so, and I would place upon such persons the burden of proof. It ought to be required of any man or women proposing to doctor the human race that each and every one of them qualify in all respects as competent before a legally constituted examining board or committee. I advocate a system that will require practitioners to furnish evidence of such authorization and competency. Men trained in the science of medicine should devise the methods by which this objective may be attained."

Lieutenant-Governor T. W. Davidson of Marshall, has had occasion to favor legitimate medicine and proper public health legislation, and has done so without stint. As a matter of fact, he has heretofore taken an advanced stand on some of the problems with which we have had to deal, without persuasion and on his own account. We quote the following from his letter:

"Referring more specifically to the three propositions outlined in your letter, permit me to say:

"1. That I believe that a Board of Health empowered to select a State Health Officer, or with power to recommend competent persons for such position, would be conducive not only to the effectiveness of the Department of Health in the way of securing better men and more capable men, but would probably lead to more active co-operation of those interested in the public health.

"2. I have all along favored better treatment of our insane, for whom we have inadequate facilities. There are probably now one thousand insane persons in the jails because they cannot be accommodated in the insane asylums for the want of room. I have been one of the original advocates of a specialist on mental diseases to examine all the new arrivals, with the idea of prescribing a treatment that might lead more readily to their recovery.

"3. I believe that men who undertake to prescribe for the sick should have not only a thorough knowledge of medicine and the human anatomy, but should measure up to a common, specified standard. After they show that they possess this knowledge, then let it be their privilege to apply whatever method of treatment they see fit. First let them be competent to diagnose and understand the ailments of the human being before they undertake to administer any kind of treatment. I see no necessity for having a variety of boards for the different schools of medicine, or for those who would undertake to treat disease."

Mrs. James E. Ferguson of Temple, who has taken Ex-Governor James E. Ferguson's place in the race, has publicly stated that her husband's platform is her own. We feel reasonably sure that there is no need of discussing the attitude of Ex-Governor Ferguson toward the public health. In the light of the following plank from his platform, we presume no one will count him the friend of either the medical profession or of the public health:

"The next item is $297,000 appropriated for the State Board of Health. I would cut out of this item $10,000 for salaries and maintenance of mosquito control. Fighting mosquitoes is certainly not a proper function of government. If we undertook to kill all the mosquitoes in Texas it would absolutely bankrupt the State and then we couldn't do it nohow. I would cut out the Bureau of Laboratories and save $4,200. Likewise I would cut out the Bureau of Communicable Diseases and save $8,500 more.

"Believing that the mothers of Texas as yet have sense enough to raise families, I sure would veto the Bureau of Hygiene and save $73,000 more. Also I would put the skates under the Bureau of Rural Sanitation and save $37,000 and ditto the Bureau of Sanitary Engineering and save $27,000 more of the people's money. And the Bureau of Venereal Diseases is just plain graft, and I would cut that out and keep $13,500 more in the treasury.

"Likewise I would veto the $5,000 for the contingent fund of the State Board of Health, and I would veto their traveling expense item of $25,000 down to $10,000. It looks like every 'feller' that gets a public job immediately gets wheels in his head and begins to gouge the treasury for traveling expenses. There is at least $6,000 more I am sure could come out of this item of the Board of Health. I am in favor of looking after public health, all right, but you can't do much at the job with just clerks and stenographers and tax suckers."

The Honorable W. E. Pope of Corpus Christi, likewise failed to reply to our letter. We have not been able to find any of his friends who were willing to speak for him along the lines set out in our letter. However, in view of the fact that he voted for the McNatt (of Tarrant county) amendment to the Medical Practice Act, seeking to exempt chiropractors from its provisions, and for the Lewis (of Cameron county) amendment exempting christian science, during the regular session, and against the Melson (of Hopkins county—candidate for Attorney General) point of order, seeking to prevent the consideration of the chiropractic bill in the third called session of the Thirty-eighth Legislature, on the ground that it was not within the purview of the Governor's call, we would assume that he is not friendly to the contentions of the medical profession, at least as pertain to the practice of medicine. As a matter of fact, he was generally found supporting Representatives Davenport and LeSturgeon of Bexar, McNatt of Tarrant and Turner of Harris counties, who were the opponents to the principal legislative items supported by the medical profession, the State Board of Medical Examiners and the State Board of Health.

Judge Felix D. Robertson of Dallas, has pronounced himself in entire accord with the medical profession in its demands for public health and medical legislation. We quote the following from one of his letters:

"I am desirous that you and the splendid class of citizens whom you represent, shall be assured of my keen appreciation and respect for and my cordial confidence in the great medical profession as an organization, and my approval of a law which ought to control and add greatly to its usefulness. The law in question, as I understand it, makes the same

demand for qualifications on all practitioners, independent of the method employed in practice. This would seem to be a just regulation and one needed to protect the public against ignorance and its attending evils."

LIEUTENANT-GOVERNOR.

The Honorable Will C. Edwards of Denton, was not considered friendly to the legislation sought by the medical profession in the Thirty-eighth Legislature. He voted for engrossment of the Medical Practice Act in the House of Representatives, but voted for the McNatt amendment exempting chiropractors from the Medical Practice Act. He then voted against suspending the rule and passing the bill without further legislative turmoil, which was not a kindly thing to do. He likewise voted for the Lewis amendment to exempt the christian scientists from the Medical Practice Act. The following from a letter from Mr. Edwards is further elucidative:

"I am quite in sympathy with a revision of public health laws looking to the more efficient and economical administration of the Health Department, and, while I am declining to commit myself in advance on any specific legislation of any kind, I believe a bill can be evolved to meet my ideas, although, of course, I should have no vote except in a tie. I am anxious to provide adequately for the insane of the State, and anything looking toward that would have my sympathetic interest. I believe in the maintenance of the high educational standards for those having to do with the treatment of bodily ills and that, generally speaking, the educational requirements of all practitioners should conform to those standards, fixed with some regard to the interests of all affected thereby. People who know me know that I am for the enforcement of every law, and that I shall strive to be fair to every citizen, to be representative of the whole people and not of any particular bloc or group. I have consistently declined to pledge myself to anybody or to any group as to specific legislation, beyond the promise to try to do that which is fair and just, and I shall continue to adhere to that attitude.

"In conclusion, may I add that I am seeking the vote of every voter on that pledge, to be devoted first of all to the interests of the whole people and not any particular part thereof? I am wholly sincere in saying that if I can go into office in a position to serve the whole people, I shall be glad; but if I have to barter away my future actions by pledges as to specific legislation demanded by special groups and interests, then I don't want any office.

"In other words, I shall either go to Austin 'my own man,' pledged to be fair and just to all and to render unto the whole people the very best that is in me, or I shan't go. If the Democrats of Texas want my kind of folks in office, well and good; I want to serve them. But if they want one who is willing to surrender in advance his independence of action and thought at the behest of any or every organized bloc or interest in Texas, then they don't want me."

The Honorable Wallace Malone of Fort Worth, has always been a friend to medical and public health legislation. He is, in a large measure, standing on that record, and it will be quite sufficient to quote from his letter, as follows:

"You have submitted to me proposition one, two and three, in connection with your program. I will say to you that all three propositions appeal to me very much, and I am ready and willing to do whatever I can to carry out the wishes of the medical fraternity of this State in so far as these matters are concerned.

"As you know, I have had many years experience in the Texas Legislature, both as a representative from Fort Worth, and as a member of the Third House, or what is commonly known as a lobbyist, and I think I am in a position to know something about these matters, and I here and now take the opportunity to say that regardless of all the propaganda that has been put out by the people who are now trying to practice medicine, but who should come under the strict provisions of the Medical Practice Act, I have never been convinced, but on the contrary have been persuaded that if the health of this State is to be safeguarded, it is up to the medical profession to do it."

The Honorable Barry Miller of Dallas, submits the following highly satisfactory answer to our questions, referred to above:

"First: I am a firm believer that the duty of the State is to give the people an efficient Health Department, that they may have advantage of the wonderful strides that have been made in preventive medicine during the last few years. Wherever Boards are necessary for the handling of any public matter, experience has taught me that they should have interlocking terms of office so that there would always be on the Board some with previous experience in the work and purposes of the Board, and certainly a Board of Health should be given sufficient power to make their work effective or it is just a waste of the people's money to maintain it.

"Second: I am for the strictest economy in State affairs. The conditions are such that taxation is a burden as great as the people can bear at this time, and I do not want to see any increase in taxes until conditions at least justify such a course, but I surely do not believe that this economy should be practiced at the expense of the unfortunates, whether it is deaf, dumb, blind, the orphan or the unfortunate insane. It is a crime that the insane should be kept in jails. It is a crime that there is not some provisions made for their observation, diagnosis and treatment better than we have at this time.

"Third: I am in favor of keeping the present Medical Practice Act of this State as it is. About those who practice medicine or attempt to practice medicine, the law should throw every provision essential to the protection of the public who entrust their lives and health to them. I believe that the present Medical Practice Act has more than justified its existence and should not be changed."

The Honorable John D. McCall of Beaumont, has not informed us of his attitude on the subject in which we are interested and concerning which we made inquiry of him.

ATTORNEY GENERAL.

The office of Attorney General is of interest to the medical profession only in so far as the Medical Practice Act provides for his participation in the prosecution of violators of that law, and, of course, in the matter of interpreting medical and public health laws, which is of interest in common with all good citizens. We have deemed it of

importance to determine how several of these officers feel in regard to the Medical Practice Act.

Judge J. M. Melson of Sulphur Springs, will be remembered as one of the authors of the bill designed to perfect the Medical Practice Act, which became a law during the regular session of the Thirty-eighth Legislature. It will be recalled, further, that he championed this measure on the floor of the House and made a wonderfully fine speech in its behalf. His keen logic and judicial discussion no doubt overcame opposition and won friends for the bill. It will be remembered, also, that it was upon the point of order that he raised that the House decided that the chiropractic bill introduced in the third called session of the Legislature was not proper to be considered under the call of the Governor. The medical profession and the public health have not had in the House a more conscientious and able advocate than Judge Melson. The following communication from him will be of interest:

"My interest in the Medical Practice Act is incident to my desire to protect the public rather than the medical profession. I have the greatest regard in the world for the educated, ethical medical profession, and consider that it is rendering the world the most useful service possible, but the thought to be considered here is, as I say, the protection to the lay public.

"I consider the present Medical Practice Act as fully protective against ignorance and fraud, if enforced. In common with the measures designed to protect the unsuspecting public, this law should be rigidly enforced. The State assumes to protect the children of our schools against ignorant teachers, and through numerous laws of that character seeks to do the same thing in numerous directions. The State may not properly concern itself with the method of practice adopted by its licentiates under this law, but it can and should require of these individuals who would undertake the serious responsibility of practicing medicine, demonstration of their knowledge of the fundamental facts of medicine, which I understand have been contributed by numerous of the pure sciences, and applied and made useful by the medical profession.

"I am convinced that our Medical Practice Act works no hardship on adherents of the several so-called schools of medicine. As a matter of fact, the Constitution of the State of Texas requires that laws pertaining to the practice of medicine shall discriminate against no school of medicine. It is clear that an educational standard of requirements differing in any particular from that set out in the present law, no matter for what reason, would be unconstitutional, unfair and unjust. As it stands, the adherents of any school of medicine who have studied the fundamental facts of medicine, may come before this Board for examination and be authorized to practice medicine in the State of Texas. If I am elected the Attorney General of this State, I will most certainly do what I may properly do to assist in enforcing this law."

Honorable Dan Moody of Taylor, at the present time the District Attorney of Williamson and Travis counties, assures us that he is a believer in educated medicine, and is desirous of co-operating in any proper manner in enforcing the Medical Practice Act. We quote from his letter:

"The Medical Practice Act is a humanitarian measure, and is designed to protect sick and suffering human beings from the dangers incident to placing their physical welfare in the hands of the unskilled and unscientific, who profess to have a ready panacea for the relief of all maladies and physical disorders that affect the human body. I owe my life to the skill and well trained mind and hand of good and faithful physicians, and giving them and their profession tribute from my heart, I would be false to the impulses of my nature and ungrateful to their science, if I did not join with them to help protect the sick and suffering from the danger that lurks about them when they deliver their health, and very often their lives, into the hands of those who know nothing of the art and science of medicine and surgery, and who likely never heard of Pasteur, Banting, Lister, Koch or any of the other outstanding benefactors of humanity in the medical world, who lived and labored for the common cause of man and enobled and embellished your profession.

"I, therefore, stand absolutely committed to the rigid enforcement of the Medical Practice Act; and if I am elected Attorney General of this State it will be a pleasure to discharge every duty fixed upon that office by the provisions of that Act, and I will stand ready at all times to give whatever assistance possible to the County Attorneys in their efforts to enforce same. I will not neglect the injunction features of this law, but will see that its provisions are properly enforced.

"The public health measures are designed to protect our citizenship, and these laws should be rigidly enforced. As Attorney General of this State, I would endeavor to see that these laws are given their proper importance and their provisions made effective."

The Honorable John C. Wall of Grayson County, at the present time first Assistant Attorney General, has not answered our letter, but informs us by telephone that he is a believer in ethical, orthodox medicine, and stands for the rigid enforcement of the Medical Practice Act as it is written. He is equally emphatic in his insistence that all other laws on our statute books be enforced.

Honorable E. B. Ward of Corpus Christi, has not been heard from.

COMMISSIONER OF AGRICULTURE.

The office of Commissioner of Agriculture is of interest to the medical profession because of the co-operation required between that department and the Department of Public Health.

Honorable R. E. Sparkman of Ellis County, it will be remembered, voted for the McNatt amendment to the Medical Practice Act, in an effort to exempt the chiropractors from the provisions of that measure. It is true that he voted for engrossment and final passage of the act, but it might be considered that if he had been successful in his efforts

to exempt the chiropractors, the bill would have been irretrievably damaged. This reference is not made in antagonism to Mr. Sparkman, but because of his statements here quoted:

"I concede to no man a higher regard for the medical profession in their endeavor to protect human life than I have. I think my record as a member of the 38th Legislature will convince you of that fact, and I would not do less at any time. I supported, consistently, the Medical Practice Act, and the Registered Nurses' bill, and it was on my motion as a member of the Live Stock Committee that the Senate bill abolishing or repealing the law regulating the practice of veterinary surgery was defeated in committee. I stand for the high ideals of the medical profession, and if I am Commissioner of Agriculture and can be of service in raising the standard, it will be my pleasure to so do."

Honorable George B. Terrell of Cherokee County, at the present time Commissioner of Agriculture, was in the State Legislature for several terms, fourteen years in all. During that time, so far as we are able to ascertain, he was the friend of the public health and a help to the medical profession in its legislative endeavors. He writes that he is an ardent supporter of the present Medical Practice Act, and believes that the public health laws of the State should be strengthened and the scope of the Health Department enlarged and amply supported by appropriations. He has always enjoyed the friendship and support of the State Health Officers, and is co-operating with the Health Department to the extent possible under the present system. His letter to us is cordial and in support of these statements. We do not deem it necessary to reproduce it here.

COMPTROLLER.

We cannot refrain, in closing, from calling attention to the fact that the son of one of the best friends the medical profession has ever had in the Legislature, is candidate for the office of Comptroller. The Honorable S. H. Terrell is the son of former State Senator and Comptroller H. B. Terrell. The old-timers will recall the fight Senator Terrell put up for the Anatomical bill, an instrument designed to make legal the dissection of the human body, which practice was at that time specifically outlawed. They will remember, also, that he was a warm friend to the present Medical Practice Act, which became a law in 1907, supplanting the archaic multiple board system at that time provided for by law. In short, he was the champion of all beneficial medical and health legislation advanced during his term of office. We have no criticism to make of the other candidates for this office. We do not even have in mind at this time who they are. We are merely advancing this much information, and in this manner seeking to repay in part, if vicariously, the debt we owe a good friend. A letter from Mr. (S. H.) Terrell contains the following significant sentence: "I assure you that my views pertaining to Medical and Public Health matters coincide thoroughly with those held by my father, and you may rest assured that I shall ever stand for maintaining these upon the high plane they deserve."

The Publicity Campaign Is Under Way, and reports from the front are encouraging. It is not possible at this writing to estimate the degree of success attained or to give an intelligent discussion of the effort. Speakers and others in charge of the movement, have been requested to make detailed reports, and it is hoped that we will be able to satisfactorily discuss the campaign by the time the next JOURNAL goes to press. In the meantime, the State Secretary desires to hear from any member of the Association who has observed any part of the campaign and who has formed a conclusion. Opinions as to the degree of success or failure, and the good accomplished, will be compiled, analyzed and digested, and made available to the Council on Legislation and Public Instruction. Only in this manner can those responsible for this movement determine what to report to the Association at Austin next year. Communications criticizing the movement will not be taken as unfriendly. There need be no hesitancy in being perfectly frank. We take it, the medical profession is 100 per cent for the people, and the Council on Legislation and Public Instruction wears no man's collar.

Deferring Publication. — The amount of space taken up by the editorials on political subjects has made it necessary for us to defer editorial references to the Chicago session of the American Medical Association. While there is not a great deal of this material, its publication would too greatly extend our editorial pages. The meeting was most interesting, and we deem it desirable to comprehensively state, for the benefit of our readers, the most important of its transactions. It will be noted that our advertising pages this month are somewhat restricted, which limits us as to the number of reading pages we can afford to publish. It is to be hoped that our readers will help us to get more advertising matter. This they can do by constantly reminding detail men and solicitors, of the fact that we need the advertising business of the concerns they represent, if we do not already have it—and need to retain it if we do have it.

ORIGINAL ARTICLES

THE TREATMENT OF PUERPERAL INFECTION.*

BY

C. JEFF MILLER, M. D., F. A. C. S.,
NEW ORLEANS, LOUISIANA.

The many different methods advocated for the handling of puerperal infections, which vary all the way from simple expectant measures to decidedly radical operative treatment, emphasize the confusion which still exists in regard to this condition; and for that reason, I do not feel that an apology is necessary for presenting again this apparently hackneyed theme. Despite the general acceptance of the principles of aseptic and antiseptic midwifery, and the claim of every individual practitioner that he rigidly applies the aseptic ritual, the mortality and more especially the morbidity, remain distressingly high. A long and extensive experience in the septic wards of a large public hospital has convinced me that our poor results are largely due to the active local treatment so often instituted, which, in turn, is based upon a failure to grasp the new conception of puerperal sepsis.

The principles of bacteriology and pathology have a general application, and methods of treatment based upon them need only slight modifications in detail to make them applicable to the different anatomical and physiological problems presented in any structure of the body. When they are so applied, and puerperal infection is recognized for what it really is, a true wound infection, the first step will have been taken in harmonizing differences of opinion, standardizing methods of treatment and reducing the distressing morbidity and mortality of this very common scourge of women.

One of the most important facts established by the investigations of recent years, is that many cases formerly regarded as merely local infections are true blood-stream infections, and that injudicious management is the cause of the conversion of many of these apparently simple, local lesions into true systemic affairs. Moreover, it has been shown that many bacteria formerly regarded as purely saprophytic, are capable of living in tissues and causing a bacteriemia. For this reason, the old classification of sapremia is being largely eliminated, and it is recognized that any infection of the genital tract, no matter what its type, is capable of becoming a general systemic infection.

*Read by invitation before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, April 30, 1924.

The invasion of any fresh wound by bacteria is primarily a local process, which varies according to the reaction of the tissues, the virulence of the organisms present, and the general resisting powers of the patient. Extension of the process may occur by continuity of tissue, in which case it is usually limited to the involved mucosa or the placental site, though it may involve the muscle wall of the uterus and occasionally the tubes, sometimes causing suppuration; or it may occur by the lymphatics, in which case there is usually a parametritis, but sometimes a peritonitis. Thrombosis at the placental site is always present and, in fact, is a physiological process adapted to the closure of the uterine sinuses and the complex changes incident to involution. Such thrombi, however, offer a fertile field for the reproduction of bacteria and consequent infection, which may be localized, or may extend to the large trunks of the venous radicals. Infected emboli from such thrombi may produce only local lesions, or may result in a general, and often a fatal, blood-stream infection.

To the fact that the clinical symptoms are frequently the same for widely different lesions, may be traced part of the confusion which exists in regard to puerperal infection. Vulval ulcers, parametritis, general peritonitis, pyemia, septic thrombophlebitis and septicemia, may show only a slight variation in their clinical symptoms. The infection may pass through the portal of entry too rapidly to excite local lesions. This is particularly true of the virulent streptococcal and staphylococcal infections, where extension is generally by the lymphatics, and a peritonitis or septicemia is the result. The less virulent organisms usually cause a septic or putrid endometritis, the infection being limited to the endometrium, where the raw surface and gaping placental sinuses make entrance easy. In these cases there is usually, as in the saprophytic infections, considerable debris and a foul discharge, and microscopic study shows thick layers of necrotic material containing large numbers of bacteria. Beneath this layer is a thick layer of leukocytic infiltration, a reaction zone, as it were, beneath which normal structures are found. In the true septic types, on the other hand, the necrotic layer is thin and the leukocytic zone is either imperfectly developed or lacking, while the microorganisms are found deep in the decidual layers, and in the lymphatics or the muscular walls, extending out towards the peritoneal layers. The leukocytic zone is practically a filter, and will, in the majority of cases, limit the extension of attenuated microorganisms, though it will naturally fail to retain the more virulent types.

A large experience with puerperal infections has convinced me that septic thrombophlebitis is much more common than is generally supposed, and that many cases ordinarily managed as septic endometritis are really thrombophlebitic in type—a view which has been confirmed by a large amount of autopsy material. It is evident that the lesions in puerperal infections may vary all the way from a purely localized surface-infection of the perineum to extensive inflammatory effusions, single or multiple abscesses in the uterine walls, parametrium, ovaries or tubes, extensive thrombophlebitis, or even a general systemic infection without marked local changes. Any of these processes, of course, may exist in combination with others.

I take leave to doubt the astounding statements, made by busy practitioners, that they have never had a case of puerperal infection; and I also question their standards of diagnosis and classification. In my own service, we consider every case of temperature above 100 degrees, which persists for more than 24 hours, as a puerperal infection until it is proved otherwise. This is an arbitrary rule which may apparently work an injustice to the obstetrical staff, but unless it is observed, many cases of mild infection will be overlooked, which may not be serious at the time, but which may lead to a distressing morbidity in the future. A careful general examination is essential in such cases. It should be followed by a thorough bimanual examination of the pelvic structures. Perhaps 30 per cent of the cases which show only a slight temperature, will reveal some intercurrent disease. A large number will show no definite pelvic lesion, and after a steady temperature of from 99.5 to 101° F. has persisted for several days, will recover spontaneously. These are undoubtedly instances of mild infections with attenuated bacteria, usually limited to the endometrium, since many such cases present evidence of defective involution or a chronic endometritis, and months or years later, show a definite picture of chronic hyperplasia or chronic metritis.

If the pelvic examination reveals the uterus well contracted and the cervix closed, whether the case is one of criminal abortion or of full term labor, it is our rule never to invade the uterine cavity, even for the collection of smears. In such cases the uterus is usually empty, and any local treatment would be meddlesome. Intrauterine investigation would not add to our knowledge, and our chief desideratum in the treatment of such conditions is a well contracted uterine muscle, which is obviously already present. On the other hand, if the uterus is soft and boggy and the os patulous, and portions of placenta, membranes or blood clots are protruding or can be felt within the os, we remove them, always with the finger or sponge forceps, in order to establish drainage. Such debris in the lower uterine segment often causes puddling, and its removal may at once end the symptoms. The presence of debris and free bleeding, are the only indications we accept for invasion of the uterine cavity.

Intrauterine irrigation has been a routine form of treatment for many years, particularly with antiseptic solutions, and the belief in its efficacy has died hard. A composite study of large series of cases treated with bichloride and carbolic acid solutions, pure alcohol and, more recently, Dakin's fluid, will show no special advantages from such treatment; and too often there are serious results from poisoning or possibly extension of the disease from the necessary manipulations. Morever, such irrigations can be effective only when the infection is confined to the superficial areas, and it is folly to expect results from local treatment when, as is true in most cases which present themselves, the infection has already invaded the deeper structures or possibly become systemic. You are doubtless familiar with Bumm's experiments, which have had much to do with reducing the use of intrauterine antiseptics. He removed portions of the liver from an animal infected with anthrax and soaked them in a 1-1000 bichloride solution for 30 minutes. With a microtome he then removed 1/10 mm., and inocculated the section just below into a laboratory animal, which promptly succumbed to the disease, thus showing that the action of the antiseptic was purely superficial. Bumm also pointed out that because of the rapidity with which such organisms travel, satisfactory results from irrigations could be hoped for only when they were given with the first appearance of the symptoms, and that this was manifestly impossible.

If any irrigation of the uterine cavity is indicated, it should be done with sterile water or saline solution, after the debris has been removed. In our service, even this is no longer done. It was formerly supposed that the chills and the reaction following such a procedure were of a nervous nature, but Frank has shown that these symptoms are due to a temporary blood-stream infection. Blood cultures taken before and after such manipulations conclusively prove this point. It is true that in the majority of cases the bacteriemia is only temporary, but on the other hand the dose may be massive enough to bring about a fatal septicemia.

As I have already pointed out, exploration of the body of the uterus is of no real advantage. We know that ragged decidua and de-

bris in varying amounts are present in practically all the cases except the very virulent types. The gentlest manipulation may break down the protective thrombic formations at the placental site or disturb the necrotic layer which is a part of nature's protective pathology. I firmly believe that the curette has been responsible for incalculable harm in the management of puerperal infection. It is not used in similar conditions anywhere else in the body; why should it be used in the uterus? The curette merely creates fresh raw surfaces, disturbs the leukocytic layer of infiltration, and favors a general infection. It is bound to cause the breaking down of thrombi, which are probably resisting infection satisfactorily, but which, if disturbed, may produce emboli, to be carried to remote portions of the body.

The advocates of intrauterine treatment, whether by irrigation or the curette, base their arguments upon gross pathology, with an entire disregard of the methods of bacteriological invasion. They ignore the fact that while they are removing debris, they are also destroying the protection nature has instituted. Moreover, the mere presence of fragments of placenta and membranes within the uterus, does not necessarily indicate that trouble will follow. In less than 10 per cent of such cases will a serious infection result, and more than 50 per cent will show an entirely afebrile puerperium. It has been conclusively proven that it is very much safer to leave debris in a sterile uterus than to attempt manual removal, unless serious hemorrhage demands such a procedure. If this be true of the clean case, it is certainly equally true of the infected or the potentially infected case, especially as we have no way of knowing whether the thrombi and deeper structures are not already involved. Portions of placenta and membranes practically always become separated and are passed in the course of a few hours or days, and delay is by no means as dangerous as attempted manual removal, unless hemorrhage forces our hand. Pituitrin, in my hands, has been a most valuable agent in such conditions, and for the last five years I have used it in every case where formerly curettement would have been the routine measure. Ergot is not as rapidly effective, but has a steady tonic effect, and the action of quinine on unstriped muscle fibre, makes that drug also a useful agent in these conditions.

Blood cultures are taken, and are repeated as often as is practicable, though positive results are not obtained nearly so frequently as the symptoms would seem to warrant, and their value is largely prognostic. Fowler's position is employed to encourage drainage, and the patient is kept in the open air and sunshine as much as possible. A free liquid diet is given, the bowels are kept open by mild laxatives, and the ice cap is used to relieve pain and reduce temperature. We do not use antipyretics. The vaginal examination is repeated about once in every 48 hours, in order that exudates or suppurative processes may be watched. When the exudate is in the broad ligament there is usually an elevation of temperature for days or weeks, despite any treatment that may be employed. Suppurative processes are evacuated through the vagina or at Poupart's ligament, according to their location. *Exudates are not opened* unless pus is definitely present. If pus tubes or ovarian abscesses develop, the patient's condition is not likely to improve until the offending structures are removed, but precipitate operation in such cases is most unwise, as the majority of these infections are streptococcal in origin, and abdominal exploration is correspondingly dangerous.

My personal experience with anti-streptococcal and polyvalent serums and vaccines, extends over several years, and the results have been largely disappointing, though I cannot say that I have seen bad effects from their use. Beyond severe constitutional reactions, I have not seen any results from intravenous injections of the various antiseptics, and very few authorities, today, champion their use, though considerable interest has been recently aroused by Young's report on mercurochrome. Injection of proteids into the circulation has been advocated recently, and I understand the results have been very good, but the series reported is still not large enough to base conclusions upon. The injection of sterile milk, intravenously or intramuscularly, has given good results in the early stages of systemic infections, but has been of little benefit in the chronic cases. Blood transfusions have not been very successful in my hands. They may do good in septic conditions arising in general surgical problems, but a varying experience in puerperal septicemia has made me very skeptical about them.

I realize that I have probably failed to offer any original suggestions, and certainly I have not outlined any specific treatment. I should like to point out, however, that the policy of non-interference which I advocate, is not only based upon pathological facts which are already proven, and is therefore not empirical, but is supported by actual results, according to my records for the last three years, in a large septic ward of a public institution, to which are admitted all frankly infected and all potentially infected cases as they enter the hospital, and to which

are transferred all cases developing signs of infection in the obstetrical wards. Naturally, we are called upon to treat many serious and unfavorable cases, particularly criminal abortions and cases delivered on the outside, with meddlesome interference.

During this three-year period, 426 such cases were admitted, including abortions and miscarriages of all types, puerperal cases delivered before admission, and infected puerperal cases from the inside obstetrical service. In every instance, our treatment was based on the principles I have outlined, absolute non-interference, unless bleeding demanded immediate intervention. Where it was necessary to invade the cavity of the uterus, interference was delayed until the acute symptoms had subsided, and surgery was limited to the simple opening of pus collections. There were 49 cases of frank septicemia, with 12 deaths, 5 being admitted moribund and dying within the first 24 hours. Four of the other cases were complicated by pneumonia, one by a puerperal psychosis and one by a postpartal hemorrhage on the seventeenth day, she having had two severe hemorrhages before admission. In another instance, death was due to typhoid fever complicating a spontaneous abortion. Seventy-four cases developed well marked local lesions, such as pelvic abscesses, parametritis, peritonitis, thrombophlebitis, etc. A large percentage of the patients had symptoms which persisted over long periods of time, and temperature elevations of from 50 to 75 days were not uncommon. The tedious and stormy course of the disease was often a temptation to resort to radical measures, but the end results amply justified our policy of waiting. Our gross mortality was 16, or 3.1 per cent, and our corrected mortality, excluding the cases admitted moribund, was 11, or 2.6 per cent. I am confident that the old radical methods would not have given us figures as low as these, and even though I have failed to suggest any new ideas, if I have emphasized again the positive danger of intrauterine manipulations and the infinitely better results of a policy of noninterference, I feel that I have accomplished something of value.

ABSTRACT OF DISCUSSION.

Dr. Harvey Matthews, Brooklyn, N. Y.: My definition of puerperal infection is a temperature of 100.5° F., following childbirth, which is sustained for twenty-four hours or more.

I agree with Dr. Miller in all that he has said, except regarding the value of blood transfusion in puerperal sepsis. I am a strong believer in blood transfusion in this condition, but not for the same purpose as in a blood loss following trauma. In our service we never give more than 200 c. c. of blood in these cases, at any one time. Only 500 c. c. of blood can be taken up by the body. Therefore, we believe in small, often-repeated transfusions every third, fourth or fifth day, depending on the reaction. We have transfused all the way from eight to fourteen times in a case. We have had three cases in the last three years, to recover from hemolytic streptococcus infection.

THE SURGICAL TREATMENT OF SOLITARY TUMORS OF THE PERIPHERAL NERVES.*

BY

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I shall confine my discussion to the surgical treatment and end results in solitary tumors of the trunks of the peripheral nerves; that is, cases in which the localized tumor of the nerve seemed to be the only or chief pathologic change in the peripheral nerves. In the twelve cases observed in the Mayo Clinic, nine were solitary neurofibromas, one was a hemangioma of the anterior crural nerve, and two were sarcomas. Operations have been performed for neurofibromas in many other cases, but in all except twelve the tumor was only a part of the general disease of the peripheral nerves, and in some cases neurofibromatosis of the central nervous system was associated.

Microscopically, these tumors may be purely fibromatous, or the fibrous tissues may have undergone myxomatous changes and the tumor thus become a fibromyxoma; or the center of the tumor may degenerate into a cyst. The essential finding is that of more or less loose or dense connective tissue cells, with elongated nuclei and a tendency to pallisade arrangement. These benign tumors may undergo sarcomatous degeneration, in which the microscopic picture is that of the ordinary sarcoma in the form of spindle-celled, and round-celled sarcoma, fibrosarcoma, or myxosarcoma. Besides the sarcomatous degeneration of the neurofibromas, primary sarcomas of the nerve trunks occur. Angiomas of the nerve trunks are quite rare. In fact, I was unable to find a report of a case in the literature. The pathologic lesions in the case reported (Case No. 3) here is that of an encapsulated tumor having yellowish degenerating material in the center, which, under microscopic examination, presents the typical picture of hemangioma.

SYMPTOMS.

The symptoms of solitary tumors of the nerves are usually very evident, and a diagnosis is ordinarily made without difficulty, although at times it may be impossible to determine whether or not the tumor is

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connected with a nerve. There are certain outstanding features that may make it possible to determine the presence of a tumor of the nerve, and also give a fair idea before exploration, of whether the tumor is benign or malignant. The following points are indicative of solitary neurofibroma: (1) the presence of a tumor in the region of a nerve;

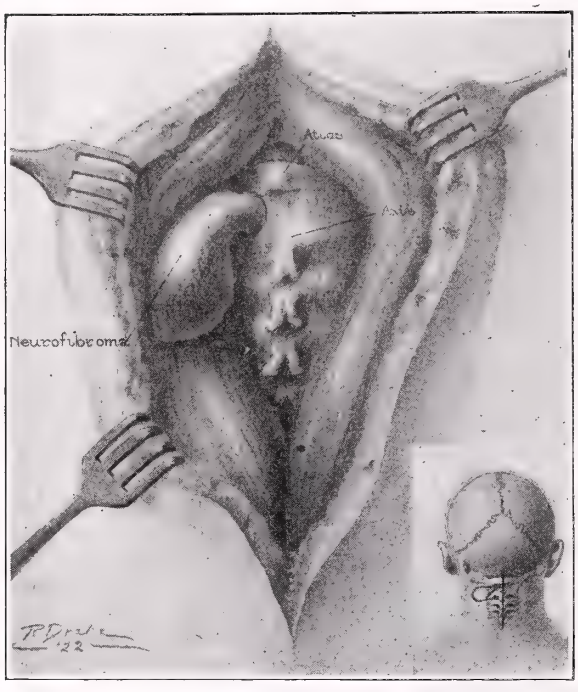

FIG. 1. Interspinal projection of a neurofibroma of the second cervical nerve on the left side, producing paraplegia.

(2) the mobility of the tumor at right angles to the course of the nerve, but not along its longitudinal axis; (3) pain, usually at the site of the tumor and along the peripheral distribution of the nerve, on pressure over the area of the tumor, on motion of the part, or injury; (4) the absence of, or slight motor and sensory paralysis of, the nerve affected, and (5) the history of long duration and slow progress. In cases of primary sarcoma, pain is an early symptom, located at the site of the tumor and usually radiating along the peripheral distribution of the nerves. Paralysis, both motor and sensory, is marked and early, and progresses rapidly. The tumor is palpable and more or less fixed to the adjacent tissues. In the case of hemangioma herein reported, there was a rather long history, with a great deal of pain over the peripheral distribution of the nerve, moderate atrophy of the muscles supplied by the nerve, and a slight loss of sensation over its cutaneous distribution. There was a palpable tumor, moderately tender and rather immobile, which may have been due to its location just below the crural canal.

Nerve tumors produce symptoms by pressure or invasion of the fibers of the nerve in which they originate, and also may produce symptoms by pressure on adjacent structure. Symptoms produced by a nerve tumor, mainly by pressure on adjacent structures, are illustrated in Case No. 1. The symptoms may be due to stretching of the nerve fibers by a tumor growing within the nerve and displacing the fibers, but not invading them, as is illustrated in Case No. 2; or they may be produced by stretching of the nerve fibers, and also by their involvement in the tumor growth, as in Case No. 3.

CASE REPORTS.

Case No. 1. Mr. F. H. S., aged twenty-seven years, came to the Clinic, May 28, 1922. He had had stiffness and soreness in the right wrist for one year, and weakness in the right arm and wasting of the muscles of the right hand for nine months. This weakness began distally and progressed to the shoulder. A little later, there was weakness and stiffness in the right leg, associated with ankle clonus. Five months after the onset, the patient

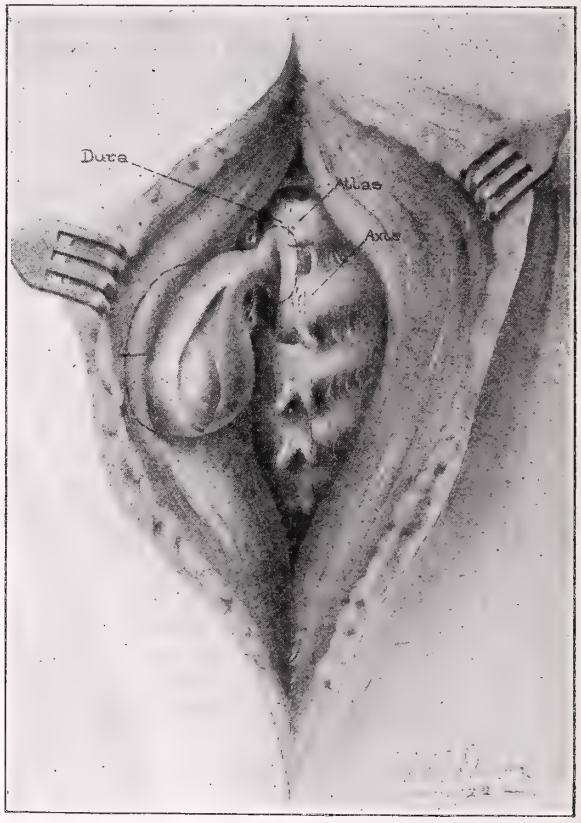

FIG. 2. Neurofibroma of the second cervical nerve.

commenced to have trouble in the left arm, beginning in the fingers and progressing to the shoulder, associated with atrophy of the muscles, with a tendency to flexion contraction. Six months after the onset, the left leg became stiff and weak. Shortly after the onset, the patient had considerable occipital headache and pain around the neck. His neck was stiff and he moved it with dif-

ficulty. Since the age of twelve, he had had a hard lump in the left side of the neck, just below the mastoid; this lump had increased in size during the last two years.

The systolic blood pressure was 112, and the diastolic 70. There was a large tumor on the left side of the neck, in the posterior cervical triangle, just back of the mastoid process. The mass was rather firm, but not movable, and was apparently deep. Roentgenograms of the cervical spine and chest were negative. The neurologic examination revealed partial loss of rectal and bladder control, and an almost complete motor paralysis below the fifth cervical segment, together with a moderate loss of pain, and tactile and temperature sensibility below that segment. The deep tendon reflexes in the arms and legs were greatly exaggerated on both sides, and positive Babinski, Oppenheim, Rossilimo, and Chaddock signs, were noted in both lower extremities. There was paralysis of the diaphragm and the patient breathed by the accessory muscles of respiration, mainly the sternocleidomastoid.

On June 22, 1922, a vertical incision was made from the external occipital protuberance, downward in the midline, and an encapsulated tumor was found lying to the left of the spinal column, between the transverse processes of the atlas and axis, the greater portion having eroded the process of the second cervical vertebra and extended into the muscles of the neck. The tumor was about 5 cm. in diameter and 6.5 cm. in length. A small median portion passed between the transverse processes of the atlas and axis into and in front of the spinal canal, pressing the dura backward against the laminae, and to the right (Figs. 1 and 2). The tumor was enucleated, and the second cervical nerve from which the tumor originated, was sacrificed (Fig. 3). Pathologic examination showed the tumor to be a neurofibroma. The patient had an uneventful convalescence. The wound healed by primary intention. Improvement in motion of the hand began within ten days, and four weeks after the operation the patient was able to move his arms and legs. His progress was steady, and when last heard from, one year after the operation, he was completely well, has good use of his arms and legs, and was carrying on his usual occupation.

Case No. 2. Mrs. G. R., aged forty-five years, came to the Clinic in December, 1920, complaining of a lump in the popliteal space. Nine years before, the patient had accidentally discovered the lump, which was then slightly movable and not painful unless squeezed. The tumor gradually increased in size. The patient had no difficulty in walking; she had occasional pains shooting down the leg and foot and up to the thigh; pressure on the tumor caused tingling under the sole of the foot.

General and neurologic examinations were negative. On December 14, 1920, a vertical incision was made over the left popliteal space, exposing a round tumor, 5 cm. in diameter, involving the internal popliteal nerve. The fibers were stretched over the tumor. The capsule was slit in a longitudinal direction, and the fibers were separated and the tumor enucleated from the capsule. Pathologic examination of the tumor revealed it to be neurofibroma. The patient recovered uneventfully and was dismissed eleven days after the operation. There was no motor or sensory paralysis, and the patient is well.

Case No. 3. Mr. H. L. C., aged fifty-five years, was examined in the Clinic, July 16, 1921. During an attack of typhoid fourteen years before, an area of paresthesia, and later, anesthesia developed, just above the left knee and outer aspect of the thigh. Twelve years before, aching pains began above the knee, which were intermittent at first, but which during the last three or four years have been constant, chiefly in a small area above the anterior aspect of the ankle. For the last three or four years, he had had severe, sharp pains in all parts of the leg, and frequent muscular jerks in the left quadriceps. Measurements six years before had disclosed atrophy of the left thigh and calf. Four years before, a lump in the left inguinal region had been noticed, which had increased during the last three years.

Slight atrophy of the left thigh and a deep, rather fixed tumor just below Poupart's ligament on the left side, were noted at examination. The neurologic examination revealed slight weakness of the quadriceps femoris, with slight atrophy and loss

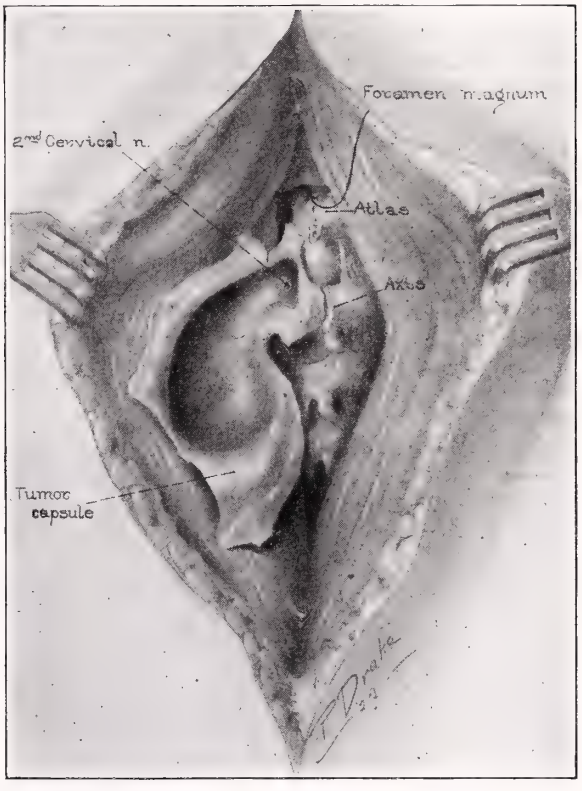

FIG. 3. Neurofibroma of the second cervical nerve.

of tonus. Patellar reflexes were absent on the left side and there was slight anesthesia on the external surface of the thigh just above the knee, and loss of pain and tactile and temperature sensibility over this area.

On July 30, 1921, a vertical incision was made in the right inguinal region, which exposed an encapsulated tumor involving the anterior crural nerve on the left, just below Poupart's ligament. This tumor was about 7 cm. in length and 5 cm. in diameter, and fusiform in shape. On slitting the capsule longitudinally, the contents were found to be partly degenerating, and yellowish, not unlike those of a degenerating neurofibroma. The tumor, which on pathologic examination was found to be a hemangioma, was not enucleated intact, being adherent to some of the nerve fibers from which the tumor tissue was dissected. The patient recovered uneventfully, and prior to dismissal, three weeks after the operation, 3,026 mg. hours of radium were administered over the site of the tumor. It is two years since the operation. The pain has disappeared and the condition of the leg is much better.

DIAGNOSIS.

The diagnosis of a nerve tumor and the distinction between malignant and benign growths of the nerve trunks, is difficult before operation, but may be accomplished if the symptoms enumerated are kept in mind. At operation, a fairly reliable distinction can be made (Thompson). In cases of neurofibroma, the tumor is rounded, and the nerve fibers are stretched over the tumor and not invaded. The nerve below and above is normal in size. On slitting the capsule in the longitudinal direction, between the nerve fibers, the tumor can usually be shelled out of the capsule, leaving the fibers intact. If the growth is sarcoma, the tumor tapers at each end into a spindle-shaped mass, so that the nerve tapers below and above the tumor. The nerve fibers do not stretch over the tumor, but are invaded by, and adherent to the tumor, and if the disease is one of long-standing, the adjacent structures are invaded by the tumor. These tumors cannot be shelled out of the capsule. In Case No. 3, in which a hemangioma was found, the nerve fibers were stretched over the tumor as they are in cases of neurofibroma. The nerve did not taper above or below the tumor, and on slitting the capsule between the fibers, the tumor could be partially but not completely shelled out, as it was fairly adherent to some of the nerve fibers.

TREATMENT.

In the treatment of benign neurofibromas of the peripheral nerves, if an unimportant sensory nerve is involved, the tumor with a section of the nerve can be excised. If an important mixed or motor nerve is involved, the capsule should be slit in the longitudinal direction of the nerve, the tumor shelled out, and the nerve fibers preserved. If the tumor is definitely malignant, more radical measures will be necessary, usually the excision of the tumor with a segment of the nerve involved, and even amputation of the extremity. In the cases reported here, in which neurofibromas were treated conservatively by complete enucleation, there were no recurrences. I agree with Gatch and Ritchey, that it is important to preserve the nerve fibers in these benign tumors. However, solitary neurofibromas may undergo sarcomatous degeneration, as illustrated by Fleming and Marvin, who reported cases occurring in three members of the same family, in two of which benign neurofibromas were removed, and the nerve fibers preserved. In the other, sarcomatous degeneration had taken place in the tumor. Thompson believes that if a single tumor is removed surgically, from a patient with multiple neurofibromas or a generalized neurofibromatosis, other tumors present are likely to undergo malignant changes. In primary sarcomas of the nerves, or in neurofibromas that have undergone sarcomatous degeneration, excision of the tumor with a large segment of the nerve, or even amputation, does not usually result in a cure, the patients dying later from metastasis. There are no statistics to quote concerning the results of conservative treatment of hemangioma. However, the patient in Case No. 3 was treated by enucleation and the administration of radium over the area of the tumor, and has been well and free from symptoms for two and one half-half years.

RESULTS FOLLOWING OPERATION.

Nine of the twelve cases were neurofibromas. In five of these the capsule was slit, and the tumor enucleated; in two, some of the nerve fibers were sacrificed in removing the tumor; in one, there was a question of the tumor being fibrosarcoma, and a section of the nerve was removed with the tumor, and in one, the nerve from which the tumor originated was unimportant, and a section of it was removed with the tumor. The sciatic nerve was involved in two cases, the internal popliteal in one case, the ulnar nerve in the axilla in one, the internal cutaneous in the axilla in one, the brachial plexus in two, the musculospiral in one, and the first cervical in one case. In the case of hemangioma (Case No. 3), the growth involved the anterior crural nerve just below the crural canal, and was partially enucleated. The patient is well and has been at work for two and one-half years. In both cases of sarcoma, the tumor arose from the sciatic nerve at the gluteal fold. One was treated by enucleation of the tumor; the other by removal of a segment of the nerve with the tumor. One of the patients died from metastasis a few months after the operation; the second has not been traced. Seven of the nine patients who had neurofibromas are well, one has permanent paralysis of the internal popliteal nerve, and one has a slight permanent weakness of the arm and hand following enucleation of a neurofibroma of the brachial plexus. I wish to emphasize the importance of preserving the nerve fiber in the enucleation of benign neurofibroma from the peripheral nerve trunks, and the fact that recurrence seldom follows this procedure.

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THE DIFFICULTIES OF TUMOR DIAGNOSIS.*

BY

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There is much room for improvement in the relations between the surgeon and the pathologist, and toward a better understanding of the requirements of tumor diagnosis. As evidence of the immense importance of developing anti-cancer knowledge, and the skill of the medical profession, in diagnosis, I point to the most illuminating and challenging report by Dr. Frederick L. Hoffman, the eminent cancer statistician. This report calls our most serious attention to the fact that the cancer death rate has increased in large American cities from 80.5 per 100,000 population, in the period of 1907-1911, to 104.1 in 1922, an increase of 23.6 or 29% in some thirteen years time. Without argument as to the reason for this increase, and regardless of any reason, this fact stands as one of the great challenges to the medical profession.

Unquestionably, the only effective weapon which we possess against the advance of this menace is better and earlier diagnosis. Better education of the public is certainly vital, but a keener interest and a better understanding in the profession, is also essential. Without caring to appear in the role of a critic of my profession, there is an appalling amount of indifference and an astonishing ignorance concerning the requirements for a reliable, finished diagnosis of tumors among those who are most responsible, the surgeons and pathologists. Young doctors of medicine have grasped the present opportunity created by the widespread demand for medical laboratorians, to declare themselves pathologists, and to undertake tissue diagnosis without proper preparation; and surgeons have not only accepted them at their own estimates, but in many instances have been responsible for non-medical technicians setting themselves up as capable of doing this character of work, which, without question, is the most difficult in all pathology, and one of the most difficult and exacting in the whole of medicine. In consequence, not only is there a block in the way of improvement, but it appears that scientific medicine is bound to suffer.

The situation calls for the closest cooperation. At the time when the diagnosis means most, the expert surgeon will fail in a considerable percentage of his gross diagnoses. The tissue diagnotician will fail in a certain percentage unless he has the necessary data at hand, and will fail utterly if he is not properly prepared. A good surgeon and a good pathologist will together make a correct evaluation in almost every instance. It is not, as some would take it, a test of the surgeon's ability or of the pathologist's keenness for either to give a correct opinion in spite of withheld information, but it is a proposition in which all that is known by each must be the property of both, and the diagnosis should be a combined one. Many surgeons appear to think that it is a test of the pathologist's ability to determine whether he can make a histological diagnosis, with no data to help him. On the contrary, it is *a mark of ignorance* for a surgeon to submit such a proposition or accept an opinion under such conditions, or for a pathologist to undertake such an examination.

As an illustration of this apparent lack of understanding of the fundamentals, a surgeon recently said to me, "I have long since ceased submitting tissues for pathologic examination, because I found that frequently the pathologist could not even say where the tissue came from." He failed to realize that in a mere piece of abnormal tissue, especially if it be a tumor, there is likely to be no evidence whatsoever of its site of origin, and that he himself was the one who should have been criticised. I have many times heard pathologists blamed for failure to agree in their reports on the same tissue. This will undoubtedly occur when a tissue is submitted to several pathologists, some of whom are incompetent. Such a test of competent pathologists, however, where complete data is submitted along with a representative specimen, will rarely show any difference, except in manner of expression and immaterial considerations. Recently, I was concerned in a case of this kind where four other pathologists had given opinions on a granulomatous lesion. The reports were submitted as all being in disagreement, and yet I could see no difference between them except in the wording and in the manner of analysis.

Not only is there a tendency to submit tissues to the pathologist with no information about the source and extent of the growth, its gross or clinical character, the age of the

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 29, 1924.

patient, or other clinical data which may be of vital importance, but frequently the tissue to be sectioned is taken from an unrepresentative part, and may not show the real nature of the disease. Not infrequently, one is able to make a diagnosis on a second specimen, which was not possible on the first. Again, specimens are often placed in some weak solution, probably alcoholic, insufficient for even preservation. A properly taken section, properly preserved or fixed, if placed in the hands of a competent pathologist, together with a complete resume of the clinical case involved, will nearly always produce an opinion or diagnosis which will be a source of satisfaction and help to the therapeutist, and will often be the determining factor in the character and extent of the treatment.

As to the competency of pathologists, there can be no doubt that the specialty of clinical pathology, meaning general medical laboratory practice, contains a great number who are not properly prepared to do tissue work. That these and non-medical technicians should not be allowed to make tissue diagnoses, is a point about which there should be no argument. Unfortunately, to the discredit of the doctors and hospitals, such is not the case. That tissue diagnoses must be made by competent pathologists is considered of such importance by the American College of Surgeons that in their program for the betterment of hospitals, they go so far as to specify that, "Tissue diagnosis should be made by doctors of medicine who are experienced pathologists, and must be recommended by two pathologists selected by the American College of Surgeons."

This is, of course, arbitrary, and lays down no principles upon which the ability of a tissue diagnostician may be judged. There should be means by which the surgeon or other therapeutist may judge the pathologist. With a view to establishing the necessary requirements for obtaining proficiency in tissue diagnosis, I have been in communication with a number of the foremost pathologists, covering well the whole extent of the country, and, without going into the details of this investigation, which will be presented before the American Medical Association at its next meeting, I may say that it is generally agreed that reliable tissue diagnoses are not likely to be made by those who have not had several years intensive and extensive experience under able teachers, after completing their general medical education.

In regard to the determination of the important facts in tumors, whether benign or malignant, the degree of malignancy, the type of tumor, the probable subsequent course, etc., there are certain general principles which are laid down. Were it a case of simply applying these principles, it would be a matter of ease. Such is not the case, however; it is rather a question of judgment of the great variation which may occur from anything taken as a type. This naturally requires a most thorough knowledge of the course of disease and a wide experience in the application of such knowledge.

ABSTRACT OF DISCUSSION.

Dr. Violet Keiller, Galveston: It is fitting that this subject should be discussed before the Section on Surgery, and I know that it is greatly appreciated. This class of work depends for its success on the fitness, training and personal experience of the pathologist. To obtain a satisfactory and helpful diagnosis, the surgeon should give full information to the pathologist. Clinical data are of great value to him, in forming his judgment. Care should be taken also that the material sent is selected from a characteristic part of the lesion. Often, tissue from regions removed from the focus of disease is sent for diagnosis. For the best results, there should be consultation between the pathologist and the clinician.

Dr. H. R. Dudgeon, Waco: I think the master surgeon is one who knows his pathology and then his technique. The pathologist should have a complete history of the case. He cannot make a diagnosis because one particular section resembles some other he has seen. The pathologist should also follow up his cases. The surgeon of the future will be better trained in pathology. Our work now is very indefinite, and on the diagnosis of tumors is not what it should be.

Dr. D. M. Higgins, Gainesville: I recently sent specimens of a bone tumor to two or three pathologists. I sent *x*-ray pictures to one of them, from which various diagnoses were made. There seems to be a great difference of opinion among pathologists, which is discouraging to the clinician. The pathologists have too many names for the same thing. The nomenclature needs simplifying. McCarthy's classification of tumors is (1) benign, (2) little malignant, and (3) malignant.

Dr. E. R. Carpenter, Dallas: The classification of brain tumors is now on a very satisfactory basis. This has been accomplished by the close co-operation between the pathologist and the brain surgeon; neither could have done it alone. Every brain tumor submitted for examination should be accompanied by a complete history, and operative notes, and sections should be made from various parts of the growth, as only a very small section may furnish a clue as to the type of tumor. In brain tumor work, the kind of tumor can often be foretold from the case history.

Dr. E. O. Arnold, Corpus Christi: Let me report the case of a Mexican patient. The symptoms were essentially those of bladder irritation. A tumor of the bladder was discovered, in which hair and teeth were found.

Dr. C. H. Harris, Fort Worth: I condemn the practice of cutting out a section of a tumor and sending it to a distant laboratory, and delaying action until the report is received. The patient should be sent to a hospital where there is a competent pathologist, in order to avoid such delay. We cannot all be specialists, but we can co-operate. Then is when our best results will ensue. Well regulated hospitals help to solve this problem.

Dr. Lynch (closing): Replying to Dr. Higgins, I think the pathologists' diagnoses meant the same thing. Pathologists should use more descriptive terms and fewer names. There would then be less confusion in their diagnoses. Dr. Harris and Dr. Dudgeon indicate a possible solution of the problem—that the surgeon should be a better trained pathologist. If I were taking up surgery as a specialty, I would take a special training in pathology, either before or at the same time.

I believe that the danger of producing earlier metastasis by biopsy, is more fear than fact. It has been shown very definitely, by Francis Carter Wood, that ordinary manipulation of a tumor is actually far more dangerous than cutting into it for diagnostic purposes. If I had a tumor, the correct treatment of which depended on a knowledge of its construction, I would not hesitate to have it sectioned.

COMPARATIVE OBSERVATIONS ON SKIN MANIFESTATIONS OF LEUKEMIA AND ALLIED CONDITIONS.*

BY

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As was aptly pointed out by Highman,[1] the skin must be considered as an organ covering the entire body, and subject to traumatism, both from within and without. It is the buffer against outside agencies that are constantly menacing the health and well-being of the individual, such as bacterial agencies, chemical irritants, as in occupational or industrial work, extremes of weather, sunlight, etc. And those from within are in the form of toxins or direct bacterial invasion, disturbances in the hemopoietic system, allergic reactions, neuro-dermatoses, etc. Disturbances in metabolism are being worked out as never before and this knowledge makes dermatology no longer an issue of nomenclature and salves. The dermatologist must have a knowledge of physiology second to no other medical specialist. Without pathology, he is a failure before he begins. So it follows that the internist and the dermatologist of today must work together. Many disturbances of the body present their most interesting manifestations on the skin.

CLASSIFICATION.

Sternberg's classification[2] of the leucemias is on a histologic basis, but differs from Ewing's classification[3], which is arrived at by a consideration of the three elements in lymphoid tissue capable of originating lymphoid tumors, lymphocytes, reticulum cells of follicles and pulp, and endothelial cells of pulp and cavernous sinuses. McCallum's classification[2] divides them into two groups, hyperplasia of lymphoid tissue and hyperplasia of myeloid tissue. There is no etiological classification, since the etiology is unknown. It has been pointed out by Bunting and Yates that, if all the efforts spent to separate these conditions had been used to correlate them, we would be nearer the solution. Studies in the hyperplasia of the lymphatic tissues and enlargements of the lymph nodes with or without leukemic states of the blood, demonstrate many difficulties in properly classifying these allied entities. In our opinion, the classification pointed out by Hazen[4] is the most satisfactory one from a dermatological standpoint. He divides these hyperplasias into six groups: I. Lymphomatoses—(a) Leukemic, represented by lymphatic leukemia; (b) Aleukemic, in which mycosis fungoides and Hodgkin's disease should be placed. 2. Myelomatoses—(a) Leukemic stages of which are represented by the so-called splenomyelogenous leukemia; (b) Aleukemic stage of which is represented by multiple myeloma. 3. Lymphosarcomas—(a) Leukemic stage represented by leukosarcoma; (b) Aleukemic stage represented by lymphosarcoma.

The term "pseudo-leukemia" was coined in 1865, by Cohnheim, to describe a case of generalized lymph-gland enlargement without a leukemic blood picture. Since then, many obscure affections of the lymph-glands have been so designated. The relation between pseudoleukemia and Hodgkin's disease has persisted in the literature. Fox and Farley[5] believe that the term "pseudo-leukemia" should only be used as an adjective, and that

FIG. 1.—Skin lesions in case of Hodgkin's disease.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 1, 1924.

1. Highman, W. J.: Dermatology, 1921, p. 12.
2. McCallum: Text-book of Pathology, 1921, p. 828.
3. Ewing: Neoplastic Diseases, 1922, p. 348.
4. Cole, H. N.: "The Cutaneous Manifestations of Hodgkin's Disease, Lymphogranulomatosis," Jour. A. M. A., Vol lxix, p. 341.
5. Fox and Farley: "Relations of Leukemia, So-Called Pseudo-Leukemia and Malignant Granuloma," Amer. Jour. Med. Sc., p. 313.

there is an adequate nomenclature for the groups to which it has been collectively applied.

Relative to the aleukemic stages of leukemia, Blankenhorn and Goldblatt[6] state that from the records of Lakeside Hospital up to December, 1920, out of 52 cases of leukemia,

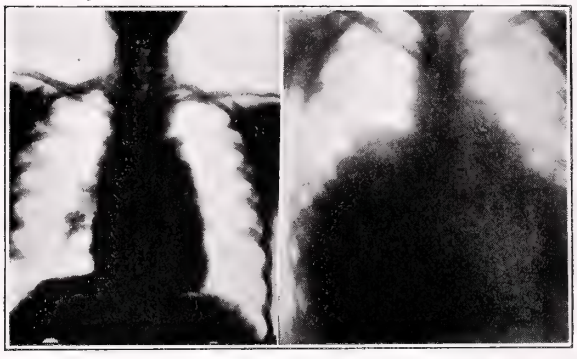


FIG. 2.—Left—Radiogram of thorax, case of Hodgkin's disease. Right—Radiogram of same thorax later, showing tumor growth.

a normal leucocyte count was found at some time during observation, in 6, and 3 of the 6 were never seen with an abnormal leucocyte count. He also cites King's reports from the Johns Hopkins Hospital, in 1917, in which, from a total of 105 cases, 14 failed to show leucocytosis at any time during observation. The term "pseudo-leukemia" means nothing in the light of the modern conception of this disease group, and its use may be discarded. Aleukemic leukemia could better be defined as a leukemia in the aleukemic stage. The term "lymphadenosis" would apply to a hyperplasia of lymphoblastic tissue. Agreeing with Hazen, an aleukemic lymphadenosis would include Hodgkin's disease, mycosis, fungoides, multiple myeloma and lymphosarcoma.

The intimate relationship existing between these affections is unquestioned, but whether they are different manifestations of the same disease, or separate entities, is not settled. Webster[7] considers lymphosarcoma, lymphatic leukemia and leukoscarcoma, as different manifestations of the same disease, and Hodgkin's disease as a distinct entity, while Strobel and Hazen[8] have stated that they think that the essential pathological picture in Hodgkin's is the lymphoid proliferation, and that the other cell types constituted an unimportant variation. Supporting this theory, a case of Hodgkin's disease is reported by Bunting and Yates[9], which developed before death a lymphoblastic leukemia; also Wende's[10] case of Hodgkin's, which showed signs of lymphatic leukemia.

Some writers have considered mycosis fungoides as a cutaneous form of Hodgkin's disease. In support of this assumption, is a case reported by Fraser[11] which gave a definite clinical picture of early mycosis fungoides, shown by the onset and development, though the case showed clinically and pathologically features of Hodgkin's disease. The relation between mycosis and leukemia is even more closely drawn at times. Pelagatti[4] has seen clinical mycosis fungoides with leukemia of the blood, and Pardee and Zeit have reported a case which, just before death, showed the signs of lymphatic leukemia. Also Kaposi's famous case of lymphadenosis perniciosa, quoted so commonly, showed this relationship. The relation of lymphosarcoma to leukemia is determined by a consideration of the kinship of leukosarcoma to leukemia, and of the case reported by Cole[4] of a possible lymphosarcoma changing to a leukosarcoma. Finally, a differentiation between lymphosarcoma and Hodgkin's disease cannot be made on clinical grounds and can only be definitely determined by histo-pathological examination.

It is not within the province of the dermatologist to classify the leukemias and their allied conditions, yet an approach to the subject from the viewpoint of the dermatologist biases one in favor of grouping them as manifestations of one disease. Such a conclusion could probably be drawn also by the pathologist, according to his inclination to find histological similarities or his steadfast determination to draw sharp lines of distinction around each of these several affections which have in common, hyperplasia of lymphoid elements.

The skin changes in lymphadenosis have been divided into changes not characteristic at all, and not clinically and histologically distinguishable from similar affections of other origin on the one hand, and changes representing true localizations of the lymphadenotic process in the skin on the other. The former, which are more frequently met, are called leukemids, a name suggested by Audry; the latter are the lymphadenoses of the skin in the true sense of the word (Arndt)[12] The leukemids embrace purpura,

6. Blankenhorn and Goldblatt: "Aleukemic Leukemia and Unusual Skin Manifestations," Jour. A. M. A., p. 583.
7. Webster: "Lymphosarcoma, Lymphatic Leukemia, Leukosarcoma, Hodgkin's," Johns Hopkins Hosp. Bull., December, 1920.
8. Strobel and Hazen," Mycosis Fungoides in the Negro," Jour. Cut. Dis., Vol. xxix, p. 147.
9. Bunting and Yates: Johns Hopkins Hosp. Bull., April, 1917, p. 151, November, 1915, p. 315.
4. Cole, H. N.: "The Cutaneous Manifestations of Hodgkin's Disease, Lymphogranulomatosis," Jour. A. M. A., Vil. lxix, p. 341.
10. Wende: "Case of Lymphatic Leukemia Apparently Developing Out of Hodgkin's Disease," Amer. Jour. Med. Sc., Vol. 122, p. 836, 1901.
11. Fraser, J. F.: "The Pathology of Mycosis Fungoides," Jour. Cut. Dis., Vol. xxxv, p. 791, 1917.
12. Arndt: "Diseases of New Growths of Lymphatic Origin," Jour. A. M. A., Vol. lxiii, p. 1269, October 10, 1914.

prurigo lymphatica, pruritus, pigmentation and universal exfoliative erythrodermia.

True lymphadenosis of the skin represents a hyperplasia not different from that occurring in other organs which might be affected with the leukemic process. It may be divided into a diffuse or generalized form, and a circumscribed form in which flat infiltrations, or tumors, arise. The lymphadenotic skin changes are in no way synchronous with, or dependent on, blood changes, and they may be the first and only recognizable symptoms of leukemia[13].

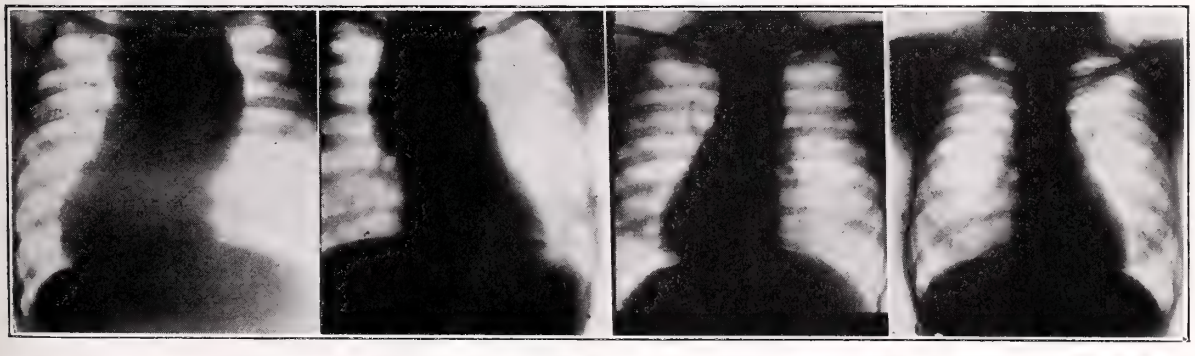
The cutaneous symptoms of Hodgkin's disease may either precede, accompany, or follow general manifestations and their incidence is estimated at 25 per cent. by Ziegler and 15 per cent. by Westphal.[4] These symptoms are pruritus, which is the most common prurigo exanthem; exfoliating erythrodermia; urticaria; edematous swellings, permanent or transitory; pigmentation, spotted or diffuse. The pigmentation is most often in the folds of the joints, abdomen, neck, face and extremities, and chloasma-like spots on the arms, hands and face. Outbreaks of perspiration are common and trophic disturbances of the skin are exhibited in the form of alopecia, dryness, atrophy and hyperkeratosis. Icterus and purpuric lesions are also mentioned by Cole. A few cases have been noted in which there occurred reddish or bluish tumors, which gave a histological picture of Hodgkin's disease. Among these are cases reported by H. Fox[14] and by Alderson[15]. The most interesting structures in the picture are the Dorothy Reed bodies, which were reported by Dr. Dorothy Reed in 1902. They are a peculiar giant cell, often spoken of in this country as Dorothy Reed Cells. Sternberg had previously described the same cells and in the German literature they are called Sternberg Cells.

Skin changes in lymphosarcoma are not so clearly defined. In fact, few descriptions of the cutaneous manifestations are found in the literature. These seem to be, as a rule, only of a pruritic nature and have little or no objective symptoms. Generalized pruritus is probably the most frequent, as in the case we are here reporting. The pruritus is intense and nerve-racking, and sometimes requires an opiate before sleep can be induced. Pruritus in lymphosarcoma is probably toxic in origin, as diminution of the activity of the lymphosarcomatous process almost immediately relieves the itching. The case reported in this paper was relieved within three days, and remained clear of this symptom for over a year.

CASE REPORTS.

Case No. 1.—This case has previously been reported.[16] It is repeated for the purpose of comparison. W. J. R., male, aged 42, was referred to us by Dr. Strayhorn of Falfurrias, with negative family and personal history, August, 1920.

Examination disclosed a tremendously enlarged spleen, reaching to midway between the umbilicus and the right iliac crest, and well down into the pelvis. He had a general adenopathy, the axillary glands being as large as hen eggs and the other glands enlarged in proportion. He was pale and anemic, and the spleen was producing pressure symptoms not only in the abdomen, but on the diaphragm. He did not complain of nausea, and elevation of temperature was not a notable symptom. His appetite was poor, and he complained of some digestive disturbances, which could be explained as pressure symptoms. He gave every appearance of a seriously ill man. In fact, his physician had told his family he could not live more than one or two months. His blood picture at this time was: Hemoglobin, 50 per cent; red cells, 3,200,000; leucocytes, 34,600; lymphocytes, 98; polynuclear neutrophiles, 2. A diagnosis of lymphatic



A B C D

FIG. 3.—Radiogram of thorax in case of lympho-sarcoma.
(A)—Appearance in May, 1922.
(B)—Same case, November, 1922.
(C)—Same case, October, 1923, after *x*-ray therapy.
(D)—Same case, April, 1924.

13. Butler, J.: "Lymphatic Leukemia with Primary Manifestations of the Skin," Arch. of Derm. and Syph., Vol. ii, p. 594, 1920.

14. Fox, H.: "Lymphogranulomatosis of the Skin in Hodgkin's Disease," Arch. of Derm. and Syph., Vol. ii, p. 578, 1920.

15. Alderson, H. E.: "Cutaneous Metastases in Hodgkin's Disease, Jour. Cut. Dis., Vol. xxxv, p. 481, 1917.

16. McGlasson, I. L.: "Report of a Case of Leukemia, etc.," Tex. State Jour. Med., July, 1922.

leukemia was made, and radium treatment over the spleen was instituted. The first treatment was 1200 mgm. hours at four points of entry, the radium being screened with silver and brass, and filtered through wood and paper at 3 cm. from the skin.

There was a rise of about 10,000 leucocytes after the first treatment. In the light of subsequent cases, this is not easily explained. On September 16, the same radiation was done, following which the leucocytes dropped to 15,800, with 84 per cent. lymphocytes.

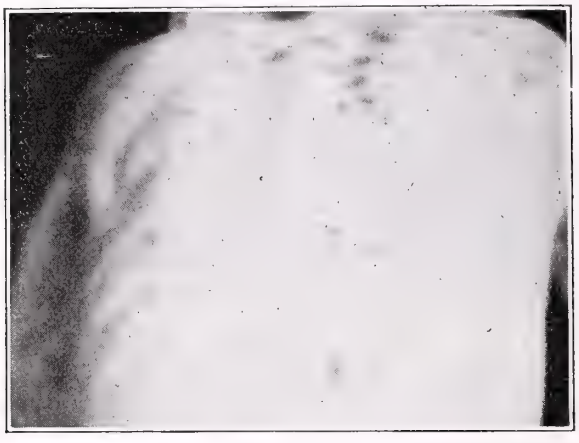


FIG. 4.—Lymphomata of skin.

On October 19, another radium treatment, with the addition of *x*-ray over the long bones, caused another drop of leucocytes to 12,800, with 65 per cent. of lymphocytes. Improvement in size of both spleen and glands was marked, the spleen receding to the left of the umbilicus. The patient's general health was improved, his appetite very good, and he was working in a grocery store every day.

The next treatment was November 22, 1920, and was as before. The spleen was now only palpable, and the glands were about the size of a small pecan. The blood picture was so markedly improved that treatment intervals were extended. The next blood report was: Hemoglobin, 80 per cent.; red cells, 4,750,000; leucocytes, 15,200; lymphocytes, 69; large mononuclears, 1; transitionals, 3; polynuclear neutrophiles, 27.

The patient's general condition was now, as he put it, "bully." He remarked that there was nothing the matter with him. The next treatment was one year after the first treatment, at which time the blood picture was: Hemoglobin, 85 per cent.; red cells, 4,880,000; leucocytes, 8,000; lymphocytes, 40; large mononuclears, 3; transitionals, 2; polynuclear neutrophiles, 54; eosinophiles, 1.

At this time, the development of cutaneous manifestations was noted. There were numerous slightly nodular lesions, varying in size from the guttate to those as large as a fifty-cent piece, slightly raised, soft to doughy to the touch, with a brownish to slightly red color. Only the new lesions, however, were red. In fact, the new lesions could be differentiated from the older lesions by their color. There were no subjective symptoms. Their distribution was over the chest, back, face, legs and arms. Some of the facial lesions were not unlike beginning nodular leprosy, but their consistency was quite different. Instead of finding a distinct nodule, there would be a doughy mass with indistinct borders, simply blending into the surrounding skin. Many of the lesions were very slightly colored. These lesions were lymphomata.

None of the lesions gave any evidence of necrosis or ulceration. The diagnosis of leukemia cutis was not difficult in this case, as the underlying leukemia was known beforehand. In a dermatosis without such a history, the diagnosis is not so easy. Undoubtedly, many cutaneous manifestations occurring in leukemias are called leukemic that are definite entities, and are simply coincident.

Case No. 2, was one of Hodgkin's disease, occurring in a white woman, aged 30, referred to us by Dr. Griffin of Beeville. There was a discrete glandular enlargement on both sides of the neck, more pronounced on the right side; slight enlargement of epitrochlears, and some inguinal adenopathy. Her chief complaint was an almost constant itching over the entire body, more marked on the legs and feet. At this time her weight had not changed appreciably.

There was nothing unusual in the personal history before the beginning of this trouble. She had had the usual diseases of childhood and had never had pneumonia, typhoid or other serious illness. She was the mother of two children, both normal deliveries. She insistently dated the beginning of her trouble from the birth of her last child, having noticed enlarged glands in her neck very soon after her last confinement, but is not very clear just when cutaneous manifestations first appeared. The glands had continued to increase in size and number up to the time we saw her. The skin became dry, thickened and rough, early in the disease.

Examination showed an apparently normal woman who did not appear to be seriously ill. However, she was quite worried as to whether she could get well. The glandular involvement was typical of Hodgkin's disease. The abdomen appeared to be normal, and no palpable masses could be made out. She would have attacks of coughing, dry in character,

FIG. 5.—Mycosis (granuloma) fungoides.

aggravated by certain positions and by excitement, which attacks would last all night, at times. The chest, nose, throat, teeth and urine, were negative. The blood count was as follows: Hemoglobin, 80 per cent.; red cells, 4,120,000; leucocytes, 9,200; lymphocytes, 16; large mononuclears, 4; transitionals, 1; polymorphonuclear neutrophiles, 78; eosinophiles, 1.

A gland, removed from the right side of the neck for examination, showed a typical Hodgkin's picture. The radiogram showed discrete glands in the upper chest, apparently not large enough to produce pressure symptoms.

The skin over most of the body was markedly

thickened and very rough to the touch, being very marked over the legs and dorsum of the feet and giving the effect of touching sandpaper. Heavy creases were shown in the flexures; the hairs on the legs were coarse, and the nails roughened and thickened. The patient was constantly scratching. This was a true hypertrophy and not a lichenification, and the thickening was uniform, worse on the feet and legs, not so marked on the hands and arms, and less so on the body. It must be admitted that this is not a lymphogranulomatosis, but comes under the pruritic affections due to Hodgkin's disease. It is recalled that Kofoid[17], and his workers, have found what was thought to be amebic cysts in Hodgkin's glands. Notwithstanding the fact that we were unable to find evidences of amebic infection, emetine was tried and was followed by only temporary improvement.

Case No. 3, was one of lymphosarcoma, in a patient, aged 35, who came to us in November, 1922, complaining of a generalized pruritus but without the skin changes described in Case No. 2. She showed scratch marks and other evidence of traumatism to the skin, but the skin, per se, was normal. Her previous history was negative

She came to us with a diagnosis of lymphosarcoma, made by a very competent internist of another city. The diagnosis was not questioned, but *x*-ray examination of the chest was made to determine the size of the growth, etc. This examination showed a rounded tumor of the mediastinum, about the size of a large apple, that could scarcely be anything but a lymphosarcoma. The patient was quite anemic and very weak, and appeared to be a very sick woman, tortured by the constant itching.

In view of the history and *x*-ray findings, a working diagnosis of lymphosarcoma of the invasive type, with generalized pruritus, was made. A roentgenogram taken in May, 1922, compared with one made in November, 1922, shows the marked increase in the size of this tumor. Another picture made in October, 1923, shows marked reduction following treatment. It was decided to attack the tumor with *x*-ray, using 140 K. volt., 1-4 mm. copper, 1 mm. aluminum, at a distance of 16 inches, for 45 minutes each, over the anterior and posterior chest. The patient had considerable radiation sickness, but otherwise no untoward symptoms from this treatment. On the 8th day, the patient reported the itching had entirely stopped, and it has not since recurred. The mass has about disappeared and she has regained her normal weight and is now doing all of her housework. She says she feels as well as ever. A roentgenogram of the chest, April 2, 1924, revealed a normal picture.

Case No. 4, was one of mycosis fungoides (Granuloma fungoides) in a fat, Bohemian woman, aged 54. She was referred to us by Dr. Peters of Schulenberg. She gave a history of the development of multiple skin tumors during the previous six months, associated with intense pruritus. There had been a prodromal period of generalized pruritus of about one year's duration. She was the mother of nine children, two of whom died in early childhood. The family and personal histories were otherwise negative. She was a healthy woman up to one year ago.

She presented nodular infiltrations of the skin, varying in size from that of a bean to large areas the size of a palm. They were of a reddish color, of boggy consistency, and many of the older ones were denuded of epidermis and weeping. These tumors occurred on the face, ear lobes, trunk and extremities. The scalp hair was sparse and the eyebrows were out. Her appetite was good, but the constant itching had done much to exhaust her strength. A biopsy of one of the tumors showed a very dense infiltration of lymphoid elements, including many small lymphocytes, plasma cells and endothelial cells, in equal proportions. *X*-ray treatments in the dosage of 1 skin unit, unfiltered, were applied over all lesions, and in the course of 3 weeks, a marked change was observed, in the nature of a flattening of some of the tumors and a drying up of the weeping areas. The patient, however, discontinued treatment and returned home, where she died within three months.

17. Kofoid, Boyers and Sinezy: "Occurrences of Endameba Dysenteriae in Lesions of Hodgkin's," Jour. A. M. A., Vol. lxxviii, p. 1604, May 27, 1922.

SUMMARY.

1. Dermatoses often reflect internal conditions.

2. There is an intimate relationship existing between leukemia, Hodgkin's disease, lymphosarcoma, and mycosis fungoides.

3. Skin changes may precede a lymphadenosis, or occur in the later course of the disease.

4. Skin changes in lymphadenosis may be lymphomas proper, or leukamides, which are not characteristic and are not clinically distinguishable from similar affections of other origin.

5. A case of Hodgin's disease, one of lymphosarcoma, and one of mycosis fungoides, are reported, showing skin changes which may be classed as leukamides, and also a case of lymphatic leukemia which presented skin tumors characteristic of true lymphomata.

ABSTRACT OF DISCUSSION.

Dr. William Allen Pusey, Chicago: Dr. McGlasson has given us a scholarly and able paper on this highly technical subject. The cases of itching and urticaria with these lymphoid diseases are not so rare, but the cases which present serious cutaneous manifestations are extremely uncommon. I have seen a great many cases of leukemia and Hodgkin's disease in the last twenty years, cases which have been brought to me without reference to skin symptoms, and it has been the rarest experience to see the more serious skin manifestations in the cases. They are extremely rare, and Dr. McGlasson has had a rare experience in seeing so many of them.

I have long since decided that these skin manifestations occur in all of this group of diseases, and with no variations that can be established from the differences in the diseases themselves. There are, of course, differences between well marked cases of lymphosarcoma, Hodgkin's disease, and leukemia, but there are transitional cases which indicate an essential relationship between these various diseases. Certainly, the skin manifestations uphold this point of view.

I have classified the skin manifestations as, first, leucemides; and, second, true lymphoid infiltrations. The leucemides are pruritus, prurigo-like eruptions, urticaria, purpura, and at times, general exfoliative erythrodermia. These are toxic eruptions. The type of toxic eruption is urticaria. All of these eruptions, in fact, are usually toxic, and hence probably toxic *in this group of diseases.* The occurrence of these toxic eruptions in the lymphoid diseases, to my mind, is a matter of interest in forming a conception as to the character of the diseases themselves. The neoplasms, even widely diffused malignant growths, are not accompanied by anything that suggests toxic

eruptions. The occurrence of these toxic eruptions in connection with this group of lymphoid diseases is an argument of considerable weight for the view that these diseases are infectious and not neoplastic.

The second group of eruptions in these lymphoid diseases, are true infiltrations of lymphoid tissue. They simply represent the manifestations of these diseases in the skin as one of the structures of the body. These eruptions are interesting, extremely rare, and often striking in their clinical appearances.

THE SYSTEMIC EFFECTS OF ORAL INFECTION.*

BY

S. B. RIGGS, D. D. S.,
SAN ANTONIO, TEXAS.

The mouth is subject to as great a variety of diseases as any other part of the body, although their multiplicity and importance are not often fully recognized. I am calling attention to some of these affections of the mouth in relation to diseases elsewhere in the body, and also to diseases of the body manifesting their presence by symptoms in the mouth.

Diseases of the mouth are local in character, or may constitute a part of the picture of dental disease. The research work of Hartzell, Black, Fones, McCall and Stillman has led me to believe that practically all oral diseases are due to a lowering of resistance; that they are either symptoms or of traumatic origin. The rank and file of dentists are busy doing repair work, and they are doing it with amazing skill and precision, but there are also in the profession quite a number of men who have long wanted to know "the why" of various perplexing problems connected with their work. The Research Department of the National Dental Association has for the past ten years been spending all of its income in real research work, last year paying out to various universities and colleges the sum of $40,000. L. D. Caulk of Philadelphia, in 1923, spent $75,000 on root canal technic.

We know that dental decay, pyorrhea and alveolar abscesses are, primarily, diseases of civilization. This being so, they are due to the manner in which civilized people live. One of the chief differences between civilized and so-called uncivilized peoples, is not so much the difference in diet as the manner of its preparation. Each succeeding (more civilized) generation eats softer foods.

I wish to call attention to some of the so-called common diseases of the mouth which dentists are often called upon to diagnose and treat.

Herpes of the mouth, commonly called canker sores, is frequently found on the buccal mucosa; it is very painful. It is nearly always associated with gastro-intestinal disturbances. Actinomycosis is found in the mouth, and decayed pulpless teeth offer a most convenient field for its implantation. Secondary and tertiary syphilitic manifestations in the mouth are too well known to require more than passing mention. Senile changes are always reflected in the mouth. The Koplik's spots of measles and the "strawberry tongue" of scarlet fever, are both well known. Lesions of the kidney are very often associated with pathologic changes in the mouth. Vincent's Angina, or so-called trench mouth, thought by some to be a new disease on account of the frequency with which it occurred during the late war, is a very old one, and had been very accurately described prior to 1906. Fusiform bacilli and spirilla are the predominating organisms of Vincent's Angina. Infections starting at the angle of the jaw and extending to the floor of the mouth, causing a diffuse cellulitis, known as Ludwig's angina, are due to streptococci, in conjunction with these organisms.

Dr. Hunter is of the opinion that septic mouths are the cause of what he calls septic anemia. Ulcers of the tongue and mucosa are nearly always present at some time in progressive pernicious anemia. I will mention, in passing, only a few other conditions and symptoms of disease found within the mouth: Tuberculosis, both primary and secondary; stones of Wharton's and Stevenson's ducts; carcinoma; sarcoma; leucoplakia, and ranula.

Diseases of the mouth include a great variety of pathological conditions, and the causes of many of these are unknown. However, those with which the dentist most generally deals are of dietetic origin. Statistics show that when there is a departure from natural foods, dental diseases begin. Jaw infections are not modern diseases, but go as far back as civilization.

The most important oral infections to be considered in connection with the general health, are those affecting the periapical tissues. Infection nearly always enters through the root canal, caused by decay or faulty root canal instrumentation, and it is upon such teeth that we find the so-called granuloma. Teeth with vital nerves do not have granuloma. A tooth which has a non-vital nerve is not a dead tooth, for it receives nourishment from the peridental membrane, and all so-called non-vital teeth are not infected teeth. The frontal sinus, the antrum, the tonsils, the prostate, the kidneys, the gall-bladder, and other sources of trouble commonly believed to be caused by infected teeth, should be thoroughly examined by the

*Read by invitation before the section on Surgery, State Medical Association of Texas, San Antonio, May 1, 1924.

physician before the case is referred for a wholesale extraction. Extraction alone will not cure granuloma, regardless of all beliefs to the contrary. The granuloma and all infected bone must be curretted, but more than two diseased sockets should never be curretted at one sitting.

Of all the diseases of the mouth that we have to contend with, I believe that pyorrhea alveolaris is the least understood and the most destructive. It is a disease of lowered resistance, either general or local. The germ invasion is secondary. It is a mixed infection consisting of streptococci, staphylococci, pneumococci and catarrhalis and influenza bacilli. The infection depends upon certain conditions—the amount of protective elements present in the blood, the health of the body, the thyroid activity, the condition and shape of the teeth and tissues, and oral hygiene.

Traumatic occlusion plays a most important part, and lack of exercise is also a great predisposing factor. The disease is usually curable, if the diagnosis is made early, and there are no bodily defects which cannot be corrected. The treatment is surgical and should be applied slowly, using the natural autogenous vaccine directly, which the patient has developed in the pus pocket, on the order of stab wounds. The reason we have so many so-called failures is that we do not get the physician's co-operation, and therefore, do not change the conditions under which the disease developed. Also, we are not always able to get the patient to carry out a thorough system of oral hygiene. The mouth should be as clean as any food which enters it. With fifty per cent of all pyorrhea patients treated, the diagnosis has been deferred, and we have the same trouble which the chest specialist and the surgeon have.

To solve successfully the problems he meets daily, the dentist must be a skilled diagnostician and, as such, be familiar on the one hand with biology and mechanics, and on the other hand with physiology and pathology. His work carries him into the fields of chemistry, bacteriology, metallurgy, physics, electricity and art, and hence, dentistry is fast being divided into specialties.

In order to place dentistry in its proper relation to the practice of medicine, it is necessary that the medical practitioner know more of dentistry. I shall speak frankly of this, and ask that it be borne in mind that my statements are made with the highest motive and in the interests of both medicine and dentistry, and above all, for the good of our patients.

Physicians, as a class, are not interested in dentistry, and so do not acquaint themselves with mouth pathology or the problems the dentist must face. Dr. Brophy of Chicago, said that before completing his last work on oral surgery, he sent out questions to eighty-three medical schools in the United States and Canada, in an effort to ascertain how many hours were given to the study of dental pathology and oral hygiene. All of the schools reported that neither branch was taught.

Physicians should be members of dental societies and dentists of medical societies. Despite the fact that, in 1887, the American Medical Association passed a resolution declaring dentistry a specialty of medicine and providing for those holding the D. D. S. degree to become members, there are very few medical societies in which dentists are eligible for membership. For this I am sure, however, the dentists are to blame.

I desire to incorporate in this paper the following conclusions, which I have reached in reference to mouth infections:

First, there is no such thing as a harmless mouth infection.

Second, contrary to general belief, the infections about the root ends of teeth are, in the majority of cases, of a non-suppurative type, and their harm to the body is due to the toxins, rather than to an invasion by the germs themselves.

Third, mouth infections may be the primary cause of disease elsewhere in the body, and often they are an influencing factor.

Fourth, the claim that no pulpless teeth can be retained is as absurd as the effort to retain all pulpless teeth, no matter how badly diseased.

Fifth, physicians should not order teeth removed, nor should dentists carry out such orders, unless both are familiar with what modern dentistry can accomplish in eradicating disease about these teeth. This also applies to infection of the investing tissues of the teeth.

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TREATMENT OF CANCER OF THE LOWER LIP.*

BY

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The principles set forth in this paper are based on two fundamental assumptions:

First, a person with cancer of the lip is entitled to the same consideration that he would be if suffering from any other serious disease, and the treatment advised should be the one that promises the surest cure, with the minimum danger to life, and with minimum pain, loss of function, deformity and loss of time.

Second, any treatment for lip cancer should be based on observations made at the operating table, at the bedside, in the laboratory and from end results. Any treatment not so founded should be classed as empirical.

The location and character of cancer of the lower lip should lead to an early recognition

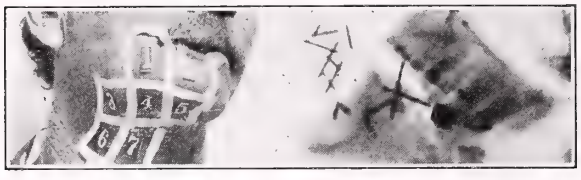

FIG. 1.—Showing areas for surface radium radiation marked off on the face with adhesive tape.
FIG. 2.—Radiogram of same case, showing 5 to 10 Mg. needles imbedded.

of the dangers of neglecting any unhealed lesions on the lower lip, and should suggest an appropriate treatment. Theoretically, cancer of the lower lip should be cured. Both the primary and secondary lesions are accessible, and the primary lesion is always in evidence, even to the untrained eye, in sufficient time for curative treatment. A cure, however, does not always result, chiefly because the cases are not seen early enough by one skilled in treating cancer.

To intelligently treat epithelioma of the lip, necessitates classification of the disease. All methods of treatment should be founded on surgical principles, and I say this for three reasons: (1) No medical treatment of cancer has proven a safe cure; (2) all accepted cures have come under surgical lines, and (3) an understanding of the surgical anatomy of the lip, face and neck, derived from one's own operative experience or from that of close active association with other surgeons, should be the guide for all treatments of cancer of the lower lip.

The principal curative methods for cancer of the lip that have been accepted are chemical caustics and pastes, sharp dissection, actual cautery, electro-coagulation, *x*-ray, radium ray, and a combination of any or all of these methods.

Chemical caustics or pastes will cure some cases of the basal-cell type in their early stages, all of which, however, could be cured by safer, saner and surer methods. The principal of applying caustics and pastes to a malignancy on the lip is unscientific, when

FIG. 3—Left—Basal cell epithelioma of three years' duration, with palpable glands. No treatment. Right—Appearance after radium treatment.

studied from our present knowledge of therapeutics or cancer pathology. The uncertainty of results and the extensive, deep and dense cicatrices that follow their use, should rule out chemical caustics and pastes.

Sharp dissection will cure those cases in which all cancer cells are removed. Due to the late stage of the disease generally seen by the surgeon, the impossibility of knowing whether all cancer cells are removed, and the frequent accident of spreading cancer cells into freshly cut tissues, sharp dissection should never be used in treating cancer of the lip, before the primary lesion and all immediately surrounding lymphatics have been treated with some ray calculated to prevent the dissemination of cancer cells when the dissection is made. Sharp dissection leaves deformity and impaired function, both of

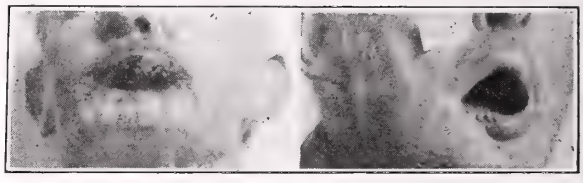

FIG. 4.—Left—Infiltrating epithelioma of eight years' duration, with palpable glands. Treatment with chemical caustics 8 months previously. Right—Same case after radium treatment.

which invite irritation and favor local recurrence.

Actual cautery and electro-coagulation are very satisfactory methods for removing the primary lesion and other sloughing tissues. However, they are of no service in sickening surrounding lymphatics and affecting blood-vessels beyond the limit of the heat, and therefore offer but little against local recurrence, unless all cancer cells are removed. It is true that slow heat, 113° F., maintained for ten minutes, will kill cancer cells in con-

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 30, 1924.

tact and will sicken tissues for a short distance,[1] but its application requires prolonged general anesthesia. Cautery dissection, when it is possible to remove all cancer cells, should be safe treatment, especially in the removal of neck glands. This requires prolonged anesthesia with the consequent risk of shock, and is followed by extensive scar-formation and deformity, with no certainty of affecting lymphatic or blood vessels beyond a very limited distance.

X-ray, though a valuable adjunct to other methods in treating lip malignancy, especially neck metastasis, has not proven a cure

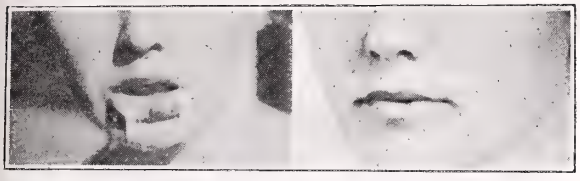

FIG. 5.—Left—Papillary wart-like epithelioma of two months' duration with no palpable glands. No previous treatment. Right—Same case after radium therapy.

for the primary lesion, and therefore cannot be accepted as a treatment of promise.

Radium rays will destroy the primary cancerous lesion and also the secondary sloughs, and in sufficient dosage, will produce caustic destruction of cancer cells for a distance of from 4 to 5 cubic millimeters, and autolytic degeneration for an additional 10 cubic millimeters. At a still greater distance, lymphatics will be sickened and small arteries obliterated, resulting in starvation of cancer cells. More or less fibrosis will follow, probably encapsulating the sickened cells. Since all of this can be accomplished with a minimum of scarring and deformity and no restriction of function, there is less liability to local recurrence than following any other treatment.

Radium rays, combined with sharp dissection or cautery dissection, is good treatment for lip cancer, but entails prolonged general anesthesia and the risk of surgical shock, and the protection against local recurrence is lessened, on account of cicatrical formation with subsequent irritation. If irritation favors the development of cancer and if scar tissue serves as a favorable host for cancer cells, the prevention of scar tissue in a location where irritation is inevitable—the lower lip, should be a most important factor. This is especially true if the corner of the mouth is involved. Even with the best of surgery, there will be some scar tissue around the angle of the mouth, and contractions which interfere with lip movement, causing almost constant irritation.

1. Percy, J. F.: Surg., Gyn. and Obstet., Jan., 1916.

The addition of *x*-rays to radium rays in the treatment of malignancy of the lower lip, can be of worth only in the absence of sufficient radium. It is generally acknowledged that the *x*-ray has but two advantages over the radium ray. Sufficient radium will overcome the first, that of covering a large area. The second advantage, reaching greater depths with more gamma rays, is unnecessary in neck metastasis, since all lymphatics and nodes of the neck are in reach of both surface and imbedded radium rays.

Epithelioma of the lower lip may be divided into two general types, basal-cell and squamous-cell. In the absence of a microscopical or a fairly well defined clinical diagnosis, both types should be treated alike. When the types are differentiated, larger doses of radium and for longer applications in the squamous cell type, and imbedded needles to their full caustic effect should be used. In treating lip cancer with radium, laboratory differentiation of the type of cell is not routinely insisted upon. It is known what the outcome may be, and that no shock, no deformity, no death, and but little pain will result from the use of radium, and that the patient has certainly as good chance for a cure as following any other treatment.

Basal-cell epithelioma of the lower lip usually begins in the skin, later involving the mucous membrane by superficial extension. It can be cured in its early stages by different methods of treatment, provided the treatment is thorough. It seldom involves the glands until far advanced, though it destroys large areas of skin and later mucous membrane, if not checked. It does not harden the tissues, and shows more of a superficial ulceration, with zigzag borders. In this type of lip cancer, the patient generally applies

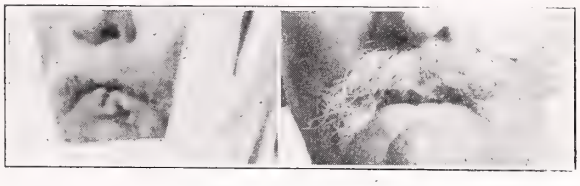

FIG. 6.—Left—Infiltrating epithelioma of four years' duration, with no palpable glands. Treated with cancer paste 18 months previously. Right—Same case after radium treatment.

for treatment before metastasis occurs, for the reason that the extensive ulceration frightens him, and he will submit to earlier and more radical treatment than when the growth is slower and there is less destruction of tissue.

The size of the lesion does not always determine the treatment nor the prognosis. A larger basal-cell ulceration of the lip is often far less resistant to radium rays than a small, hard, innocent-appearing lesion.

Location of the lesion and the tissues involved, have an important bearing on the treatment and also on prognosis. Basal-cell epithelioma of the mucous membrane are more obstinate to radium rays than those of the skin, and, in our experience, show a more decided tendency to involve bone and cartilage locally. Radium rays will not cure diseased bone or cartilage, and so in these cases cautery removal should be practiced.

Squamous-cell epithelioma of the lip may be divided into two general groups, the superficial or papillary type and the deep or infiltrating type. The former appears as an elevated, wartlike thickening, and extends slowly into the surrounding tissues as a flat induration, resting on a soft, apparently normal tissue base. This type is usually slow to metastasize, but often invades superficial tissues extensively. Later, it ulcerates and shows the usual characteristics of an infiltrating epithelioma. The papillary type, involving a large area of tissue, requires removal of practically the entire lip if treated surgically, and this results in an unsightly, uncomfortable and unsafe scar.

The deep or infiltrating type, may occur as a flat thickening of the epithelium, of slow growth, or as a nodular growth invading the submucosa from the beginning, and presenting an early fungating tumor with metastases. It is therefore more difficult to treat. The deep type frequently attacks muscle tissue, resulting in unsightly contractures and loss of function, followed by indurated masses which serve as favorable hosts for latent cancer cells and require another operation for their removal.

For the purpose of intelligently describing the treatment of epithelioma of the lower lip, it might be better to speak of it in stages according to the extent of disease.

(1) When the disease is clinically confined to the lip.

(2) When the superficial lymph nodes only are involved.

(3) When the deep cervical nodes are involved.

Out of 537 cases of squamous-cell epithelioma of the lip reported by Brodens,[2] which were operated upon at the Mayo Clinic, none with cervical nodes, or with more than one group of any lymph nodes involved, was reported as living.

Before attempting to treat lip cancer at any stage with any method, one should become thoroughly acquainted with the distribution of the lymphatics and of the lymph nodes of the neck. It is better still if one has had actual surgical experience in studying the anatomy of the neck and face.

A lesion of the mid portion of the lip would be drained by lymphatics terminating in nodes situated in the submental triangle (3—Fig. 1) on either side of the mid line of the neck. A lesion of the lateral portion of the lip would be drained by lymphatics terminating in nodes situated in the submaxillary triangle (4—Fig. 1) corresponding to the side of the lip involved. Nodes of both the submental and submaxillary triangles are intimately connected by a network of lymphatics that anastomose with those of the opposite side of the neck and drain into the superficial (6—Fig. 1) and into the superior deep cervical nodes (5—Fig. 1), and the lymphatics from these drain into the inferior deep cervical nodes (7 and 8, Fig. 1) and into those situated in the supraclavicular fossae, and so on.

Fig. 7.—Left—Papillary epithelioma of eight months' duration, with palpable glands. Treated previously with cancer paste. Right—Same case after radium therapy.

In all suspected malignancies of the lower lip, the primary lesion and neighboring lymphatics should receive surface radiation to the point of skin toleration before other treatment of any kind is resorted to. Later, the primary lesion should be surrounded by imbedded radium needles, and if a clinical diagnosis of squamous-cell cancer has been made, the lymphatics of the neck should be included in the surface radiation, and all palpable glands should have needles buried in them.

The indiscriminate use of caustics, cautery, electrocoagulation, *x*-ray and radium, and incomplete dissecting operations, should be condemned. Fractional and insufficient doses of radium rays should not be used, even in the removal of what appears to be a small rodent ulcer. Treatment with radium rays of the primary lesion only is no more excusable than the removal of the primary lesion alone, with knife or cautery.

None of our cases having passed the five-year period, I make no claim of cure, but our results, after three years' use of radium in lip cancer, are more satisfactory than twenty years' use of other treatment in my personal work.

In discussing this subject before the South Texas District Medical Association, at a

2. Brodens, A. C.: Jour. A. M. A., Vol. lxxiv, p. 656.

meeting in Beaumont, three years ago, I advocated pre-radiation and block dissection of neck glands in hopeful cases. Not until radium technique was developed and thoroughly tried with such splendid results, did I become convinced that sharp dissecting surgery was not only unnecessary but very harmful in some cases of cancer of the lower lip.

While I do not wish to go on record at this writing as stating that all lip cancers, with or without metastasis, should be treated exclusively with radium, I believe that radium rays come nearer meeting all of the indications and adhering to the principles worked out at the operating table, than any other method known. In exceptional cases the addition of the cautery and electrocoagulation can be advantageous, but radium rays should form the basis of all treatment for cancer of the lower lip.

A blood Wassermann is made on all lip cases, before beginning treatment.

TECHNIQUE FOR RADIUM THERAPY.

Mark clearly one-inch squares over the corner of the mouth, lower lip and the submental and submaxillary triangles on the side of the lesion. Apply 50 mg. of radium at one inch intervals over these areas (1, 2, 3, 4 and 5, Fig. 1) for four hours each, at each sitting, for from two to four sittings, reversing the axis of the radium applicator at each sitting. Two weeks later, completely surround the primary lesion with embedded 10 mg. needles, 8 mm. apart, to remain embedded for from two to eight hours. Mark three other areas over the course of the

FIG. 8.—Left—Infiltrating epithelioma after several months' duration, with palpable glands. No previous treatment. Right—Same case after radium therapy.

cervical and jugular nodes (6, 7 and 8, Fig. 1), and irradiate at one inch distance to skin toleration, during the interim if advisable. If the glands are enlarged, embed needles in each of them about two weeks later.

We have used this technique in 16 cases of epithelioma of the lower lip, 5 of which were diagnosed microscopically, with complete healing in all but two cases and no recurrences to date. One of the two healed promptly after the patient had consulted a paste man and before the radium reaction had passed, and the quack reaped the credit for the healing. The hopeless condition of the other patient prevented the completion of the treatment, and the patient died soon after leaving the hospital. The electric cautery was used in two cases after healing, to remove small lumps, which proved to be imbedded hairs within the fibrous capsules.

The amount of radium at single sittings ranged from 50 mg. in small lesions to 200 mg. in more extensive lesions. The milligram hours in surface applications varied from 3,000 to 8,000, and the total milligram hours of embedded 10 mg. needles were from 120 to 600.

ABSTRACT OF DISCUSSION.

Dr. G. V. Brindley, Temple: Some seven years ago I read my first paper before this section. Dr. Norsworthy opened the discussion.

At a meeting of the American College of Surgeons at Boston, some eighteen months ago, one evening was given to discussion of skin cancers, and the concensus of the opinion of those taking part in the discussion was that a cautery excision was preferable to local radium application, and that a gland dissection of the neck should be advised in a majority of these cases.

It was emphasized by one of the speakers that radium emanations implanted in the growth would give a very satisfactory percentage of good results, and a much higher percentage than with radium surface application. Superficial applications of radium are probably not much better than caustics. The age of the patient and the character and duration of the growth, are all factors to be taken into consideration in the treatment of cancer of the lip. In old people, sometimes palliative measures alone should be used, but in patients in good physical condition, more rigorous treatment can be instituted.

For all except the very early cancers of the lip, a preferable treatment would be a cautery excision of the local lesion, followed by a cautery dissection of the neck, this associated with subsequent deep *x*-ray therapy. The deformities of the lip can be taken care of by plastic operations. A majority of these operations should be performed under local infiltration, field block, or nerve block.

Dr. J. M. Martin, Dallas: Any method that will cure cancer is welcome. I want to speak more of *x*-ray treatment. The technique in *x*-ray is as important as that of radium treatment. We should try to eliminate scar tissue as far as possible.

Dr. J. W. Jenkins, Waco: I see many cancers of the lip and I do not confine my treatment to radium, especially radium needles. Unless one has an extremely vicious malignancy, I believe radium needles should be avoided. The secondary rays which are set up in the metal of the needle are so caustic that complete necrosis of the tissue occurs in close proximity, and such fibrosis that even though the patient is cured of the cancer, he has more unsightly scar that that produced by surgery. The radium plaque and *x*-ray are preferable if the patient's appearance after treatment is taken into consideration. In most of our cases, we use the *x*-ray exclusively, as we do not need as hard a ray as that produced by radium. Fibrosis and blanching of the tissue is much more marked from radium than from the *x*-ray. I regard the radium needle treatment in small lip cancers far less desirable than *x*-ray therapy.

Dr. Norsworthy (closing): Cautery dissection, as described by Dr. Brindley, is splendid treatment for cancer of the lower lip, and until the technique for

the application of radium rays was perfected, I believed it the safest and surest cure, especially when neck glands were involved. Larger clinics report, after a thorough follow-up system, that no case with involvement of more than one group of glands has reached the five-year period alive, following any form of operative treatment; also, that fifty per cent of all cases without clinical evidence of metastasis, show involvement, microscopically. These two facts added to the accepted belief that scar tissue serves as a favorable host for cancer cells and that irritation is an important factor in local recurrences, do not recommend cautery dissection as the treatment of choice.

In many cases, a clinical diagnosis is sufficient. Routine biopsy in suspicious lip malignancy is dangerous practice and should be condemned; however, a biopsy in many cases is easy and safe, and should be done. Having had no experience with *x*-ray treatment of lip cancer, I cannot discuss it intelligently. I congratulate Dr. Martin on his results, and if the cases he reported were true squamous-cell epithelioma, they are the first I know of, reported with such splendid results. I am not prepared to advocate radium rays to the exclusion of all other forms of treatment for lip cancer, but must admit that after summing up all available information about malignancy of the lower lip and its treatment, radium rays come nearer meeting the indications from a scientific viewpoint, and that the results following their use have been equal to that following any other form of treatment.

NEPHRECTOMY: REPORT OF TWO CASES.*

BY

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A full discussion of nephrectomy is not contemplated in this paper, which is merely a report of two such cases that seem unusual enough to justify reporting.

CASE REPORTS.

Case No. 1.—This patient, a woman, was seen at Lamesa by Dr. J. C. Loveless, who asked me to see her with him on December 16, 1917. She was 56 years of age, of medium stature, not well nourished, and with pale mucous membranes. There was no adenopathy. The lungs were apparently normal and the heart was free from murmurs. The history of her present trouble covered a period of thirty years. From the beginning, she had complained of pain, sometimes sharp, with radiations resembling renal colic. Most of the time there was a sensation of weight and dragging, rather than pain. The pain was centered about the left kidney and, at intervals of months or years, there had been attacks severe enough to require morphia. She had been told from the first that she had kidney stone. While she had never had an *x*-ray examination or been cystoscoped, she accepted this diagnosis, but because of an intense prejudice against surgery, had sought only immediate relief at the periods of acute colic.

After a few years, the patient recognized that she had a swelling in the left side, and felt that its size varied from time to time—that when she had an unusual output of urine the tumor diminished in size, and at that time she had the greatest relief from pain. With the growth of the tumor, she complained of indigestion, constipation, dyspnea, palpitation, and transient swelling of the face and limbs. The history of the case was much like that of intermittent hydronephrosis, but for years the urine had contained pus in large amounts.

At the time I saw her, she had a temperature of a little more than 101° F. and a pulse of 110. She was restless, generally uncomfortable, and was vomiting a large part of her food and drink. The abdomen was greatly enlarged, especially on the left side. Palpation revealed a mass filling the whole left side of the abdomen and extending fully two inches beyond the naval. The mass was fairly smooth but tense, ovoid in shape, and reached to the pubic symphysis below, disappearing beneath the rib border above. Vaginal examination showed that no connection existed between the tumor and the uterus and its adnexae. No *x*-ray machine was available. On cystoscopy, the bladder showed some chronic inflammation. A catheter was easily passed to the right kidney, and the urine withdrawn was clear. The left catheter was arrested at a point about half way between the bladder and the kidney; there was no urine passing through the left ureter. Notwithstanding the large size of the tumor, it seemed certain that we were dealing with a pyonephrosis, and that immediate relief was imperative.

Anticipating the difficulty and danger of immediate nephrectomy, it was decided to do a nephrotomy under local anesthesia, and this operation was done with very little pain. The fibrous capsule of the kidney was the wall of the abscess, there being no perirenal collection. When the pus sac was reached it was punctured with a scalpel and an effort made to collect all the pus for measurement. By shifting the patient's position and by pressure, the sac was almost completely emptied. The amount of pus caught and measured was full three quarts. At least one quart was spilled. The sac must have contained about four quarts of pus. The patient obtained relief, and the following day expressed herself as comfortable, and she was able to retain food and water.

Because of our dread of the adhesions that rapidly follow nephrotomy, the patient's condition being good, an operation for removal of the kidney shell was carried out under ether, seven days later. This operation was accomplished with no unusual difficulty, and was followed by a very smooth convalescence. This case owes its interest to the fact that we had a pyonephrosis of unusual size; slow-growing tumors of large size of any kind being uncommon in present-day surgery. A feature of the case that impressed us, was the seeming advantage of doing the nephrotomy before undertaking nephrectomy.

Case No. 2, one of "acute kidney," if such a term may be used, a case of multiple septic infracts of the left kidney, characterized by the absence of practically all symptoms that would indict the kidney.

The patient was a female, 22 years of age, and of spare build. She was married and had one child. Her family history was negative, and the personal history was negative, except for two or three attacks of tonsillitis, the last being fully two years previous to examination. The tonsils were then apparently normal.

The patient became ill August 12, 1922, at 1:00 a. m., having been awakened from sound sleep by severe pains in the left side, followed by a chill and vomiting. The pain was severe but not definitely localized—the patient not being certain whether it was in the lower chest or upper abdomen on the left side. Her breathing was short and rapid, and she thought it hurt her to take a deep breath. When seen the following morning, the history of the onset and her general appearance, suggested lobar pneumonia, but the lungs were clear and remained so.

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 29, 1924.

Her heart was apparently normal. Her temperature was 103.5° F. and the pulse 114. For the pain, ¼ grain of morphia was given and a hot water bag applied. There was tenderness over the abdomen in front of the kidney and above the kidney level. At no time was urination frequent or painful.

She did not sleep much during the night of the twelfth, and had another chill about midnight. The following day, the thirteenth, the pain was more marked in the loin, but there was marked tenderness over the front of the abdomen on the left side. The blood count showed 15,000 white blood cells. The *x*-ray examination was negative. Close questioning failed to develop any history of injury, though she had been horseback riding several times during the previous week. During the day her temperature reached 104.5° F., and her pulse was 122. On the fourteenth her temperature remained high, several readings being over 104° F.; there was chilliness but no chills. The right side of her abdomen was relaxed, but there was distinct tenderness over the left side in front and over the loin. In the afternoon she had another chill, with a temperature rise to 105.2° F.

On cystoscopy, but little bladder change was noted and no marked change about either ureteral orifice. The output from the right kidney during the twenty minutes that the catheters were in place was twice that from the left kidney. The microscopic appearance of the urine from the two kidneys was not greatly different, both showing albumen, numerous casts, a moderate number of pus cells and many red blood cells. The patient spent a bad night and was growing more septic. She had slight sweats but the temperature remained high and the remissions were slight.

It was now quite obvious that we were dealing with a most urgent condition, one in which the patient was being overwhelmed by some poison, the general appearance of the patient being very much like that of an advanced puerperal sepsis. While there was nothing to indict the kidney, except the location of the pain, we concluded that it could be nothing but some acute lesion of the kidney. On reaching this conclusion, we were aided by the fact that the patient was thin, and that the trouble was not in the right side, where we would have been called upon to consider a severe infection of the gall-bladder or the appendix, as well as some other intraperitoneal condition—in either one of which the urinary change might have approximated that found.

The patient was prepared for operation on the morning of the sixteenth, approximately three days after the onset, and a nephrectomy was done, under a combination of spinal and local anesthesia. The kidney was exposed through a lumbar incision. Because of the free use of one-fourth of 1 per cent novocain by infiltration, it was not possible to determine how much of the edema about the kidney was due to inflammation. The fatty capsule was easily separated, and disclosed a greatly enlarged kidney, of a color much darker than normal, upon which even darker spots were showing through the capsule. It had been easy to mobilize the kidney, but before proceeding to remove it, gauze was packed around it. The blood supply was controlled by finger compression and the capsule was incised for two inches, when a bulging of the kidney parenchyma showed the great tension under which it had been held. Going a little further, the kidney was incised and the individual darker areas studied. They were softer than the surrounding parenchyma, but not breaking down. The pedicle was then clamped and ligated. The wound was closed in layers, with a good sized cigarette drain left in place. The postoperative course was striking. The temperature fell to 100 in twenty-four hours and never exceeded 100.5 during convalescence.

The literature is not lacking in case reports of focal suppurative nephritis, but it seems that the fulminating cases are rare and not easily recognized, though usually there will be some suggestive findings. We see a fair number of cases that are less acute, where the constitutional disturbance is not so severe and the patient is able to survive the period required for the infarct to soften and form an abscess, which usually breaks into the kidney pelvis, after which time the marked pyuria and the *x*-ray examination enable one to make a diagnosis. These cases at the time of operation are examples of acute pyonephrosis.

The *x*-ray, cystoscope, renal function tests, and careful urinalysis, are such important aids in the study of urological cases that it is possible to make an accurate pathological diagnosis in a very high percentage of cases; but in the case covered by this report, none of these examinations disclosed anything conclusive, and the only earmark in a case that was rapidly moving toward a fatal ending, aside from the constitutional symptoms, was the location of the pain.

ABSTRACT OF DISCUSSION.

Dr. F. S. Schoonover, Fort Worth: This paper has brought to my mind two cases which are worth considering, in addition to the general problem of nephrectomies. The first case was that of a young girl who had an embolic nephritis, tuberculous in nature. The involved kidney was explored and split at the time of operation, but no tuberculous focus was demonstrated. One month later, this patient had a very severe hemorrhage from this kidney, and I removed the kidney to save her life. It is very unwise to split a kidney to make a diagnosis, and the doctor who did that in this particular case nearly cost the patient her life. The second case was that of a horseshoe kidney, with a pyonephrosis on one side. It illustrates the fact that some horseshoe kidneys can be resected safely, but the cases must be chosen with great circumspection.

Dr. A. Clay Gilbert, Dallas: The first case presented in Dr. Hall's paper, obviously represents the end results of ureteral obstruction. The most interesting feature in connection with this case, is the pathological lesion responsible for the obstruction, which it seems Dr. Hall was not able to definitely establish. The most common cause of such a condition are renal or ureteral calculi, strictures and kinks of the ureter, aberrant blood vessels, and tumors of the kidney and renal pelvis. Most of these conditions can be demonstrated by urography. Tumors of the ureter and kidney demand radical surgery, even though recognized in their incipiency, and other kidney lesions should be diagnosed promptly if many kidneys are to be saved.

The second case reported in this paper, was, in my opinion, one of cortical abscesses of the kidney. These infections are blood-borne. Diagnosis is made from the history, physical examination, clinical course, and urinalysis, including cultures of the urine, and also from blood-cultures. Such lesions are frequently bilateral, and what is considered the good kidney, may be the more diseased of the two. The

abscesses should be exposed and drained in most cases, reserving nephrectomy only for extreme cases. If B. coli is the invading organism, open operation is rarely indicated, as this organism does not ordinarily produce pus-kidneys.

Dr. H. R. Dudgeon, Waco: Kidney infections are of various intensity. In large pus sacs, the ureter is often enlarged. Acute cases may be divided into two classes: (1) Ascending, if pelvis is infected—the kidney may be destroyed; (2) local abscess—primary metastatic. Perinephritic abscess may result. The kidney should be removed when there is multiple infection. If there is a single slight infection, resulting in a perinephritic abscess, the kidney may be saved. I think novocain anesthesia is best in the majority of these operations. I think Dr. Hall was right in first case reported, in draining the largest pus sac and then performing a nephrectomy later, when the patient's condition justified.

Dr. C. H. Harris, Fort Worth: These cases demand judicious surgery. Urology has made great advances in the past few years. The location of the infection, its duration, etc., would determine my procedure. Long-continued pressure destroys the kidney, when nephrectomy is indicated. Acute cases more often call for palliative measures. I agree with Dr. Hall, however, in his method of handling the cases reported. In kidney operations, I prefer the anterior incision.

Dr. Hall (closing): In answer to Dr. Gilbert's suggestion that the kidney can often be saved in these cases by free incision, I wish to say that we approached the case reported open-mindedly, and did not decide upon removal of the kidney until it had been incised from pole to pole and the presence of multiple foci determined. In this case, the complete removal of the kidney was the only means of saving the patient's life.

DIRECT LARYNGOSCOPY BY MEANS OF THE DIRECTOSCOP OF HASLINGER.*

BY

SIDNEY ISRAEL, M. D.,
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The indications for and advantages of direct exposure of the larynx, have been definitely established during the past ten years, and Killian's method of suspension laryngoscopy played no small part in this development and progress. This method afforded a heretofore unobtainable, direct exposure of the larynx, and permitted both hands to be freely employed in any corrective measure necessary. Direct laryngoscopy has, therefore, made for itself an indispensable place in the laryngologist's armamentarium, and, as a result, offers unrivalled advantages.

In the performance of direct exposure of the larynx, with the instrument originally devised by Killian, or one of its modifications, we are forced to admit that while the exposure accomplished is complete and satisfactory, it possesses several distinct features that are still open to criticism and, at times, appear as real objections, or disadvantages. And when in the hands of the unskilled, this method is not employed without a certain amount of danger to the patient.

It is because of an appreciation of these facts that I desire to present the Directoscop of Haslinger, which, in my opinion, marks another forward step in laryngology. The indications for its use are the same as would obtain for suspension laryngoscopy.

The directoscop is possessed of all of the advantages of Killian's Suspension Laryngoscope, and none of its disadvantages, and, in addition, possesses many distinctive attributes of its own. The principle of the directoscop differs from any other instrument devised for direct exposure of the larynx, in that the hypopharynx and the underlying vertebrae are used as a fixed point from which counter pressure is produced for advancing the tongue and epiglottis forward to expose the larynx. It is a self-retaining apparatus, on the principle of a bi-valve speculum, having two essential parts, to which are given the names, "tongue spatula" and "pharynx spatula," and also a "hypopharynx plate." To the distal end of the pharynx spatula is attached a movable metal plate for the hypopharynx. This plate is self-adjustable and is controlled by means of two rods, which allow the plate to be pushed forward and pulled backward at the proper time to effect complete exposure. The metal plate is, by means of a spring, self-adjustable after being placed in position.

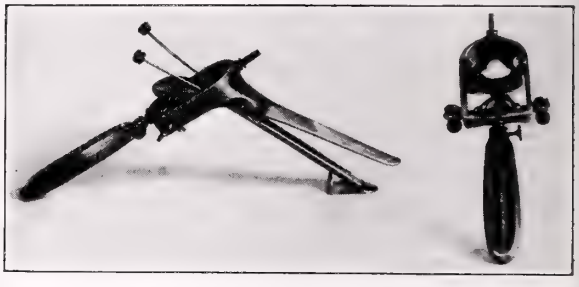

FIG. 1.—Directoscop of Haslinger. Left—Front view showing winged bolt on each side, with which to separate tongue and pharynx spatulae. Right—Showing tongue and pharynx spatulae separated with hypo-pharynx plate before extension.

After the instrument is properly introduced, the exposure of the larynx is controlled by means of a winged bolt, which causes the tongue spatula and pharynx spatula to be opened or closed at will, with either the right or left hand. Upon withdrawal, the winged bolt should be turned so that the tongue spatula and pharynx spatula are in contact, or closed, but the location of the hypopharynx plate does not have to be changed at the time of withdrawal. The handle of the instrument is adjustable to a

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, May 1, 1924.

metal post, either above or below, so that it can be conveniently manipulated, depending upon whether the patient is in an upright or recumbent position during its introduction. Local anesthesia is the rule rather than the

FIG. 2.—Radiogram of the Directoscop in place, in the sitting position, exposing the larynx completely.

exception in adults and, except in children, is all that is required. No form of gallows or suspension is required; nor can any injury occur to the patient's jaw or teeth. Movement of the head, on the part of the patient,

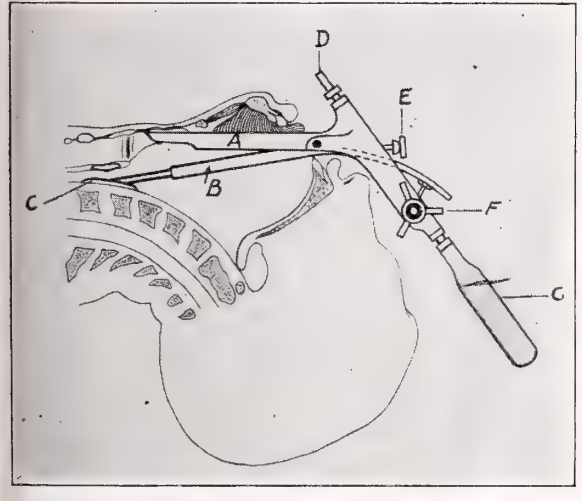

FIG. 3 —Diagram showing the instrument in place in recumbent position and relationship of the hypo-pharynx plate to the cervical vertabrae. The distal end of the spatula holds the epiglottis, so that complete view of the larynx is obtained. A—Tongue spatula; B—Pharynx spatula; C—Hypo-pharynx plate; D—Metal post for attachment of handle or light; E—Metal rod for pushing forward or withdrawing hypo-pharynx plate; F—Wing bolt for controlling the spread or opening of the tongue and pharynx spatulae; G—Handle.

produces no disarrangement of the exposure accomplished, and the head is not extended over the end of the table when examination is carried out in the recumbent position. The exposure is complete, including the hypopharynx, larynx, anterior commissure, trachea and esophageal entrance. There is no pain or shock, nor do the patients complain of post-examinational discomfort. The instrument may be kept in place for a longer period than in any other method of exposure heretofore devised, with little or no discomfort.

CONCLUSION.

1. The instrument possesses the maximum simplicity.
2. It retains its position when properly introduced.
3. It allows the employment of either or both hands, for whatever therapeutic measure is to be employed.
4. It can be rapidly introduced or withdrawn.
5. Due to its size, it occupies little space and is portable.
6. And, lastly, it is inexpensive.

ABSTRACT OF DISCUSSION.

Dr. Geo. S. McReynolds, Temple: The directoscop is a very distinct advance, and Dr. Israel is to be congratulated for bringing it to our attention. It has certain advantages over the suspension method. The magnitude and expense of the suspension apparatus has deterred many men from using it. The smallness and portability of this instrument should recommend it to us, and after it has been used more it will probably recommend itself to all of us.

Dr. F. P. Schuster, El Paso: The directoscop is a great advance in laryngoscopy. There is probably no one instrument that will fit every case. Every instrument has its particular field, where it is especially adaptable. This instrument will probably have a wider field of application than any other instrument which has been devised for exposure of the larynx. Dr. Israel deserves credit for the introduction of this instrument, and its use in the United States.

Dr. Louis Daily, Houston: I was in Vienna at the time that Dr. Haslinger devised this instrument. In the Hajek Clinic for the last couple of years, Dr. Wesely has been working out a method of treating laryngeal tuberculosis directly with a carbon ray that simulates sunlight. At first a modified Killian suspension apparatus was used. This was not very satisfactory, as it took a good deal of time and it required two people to handle the instrument; and it was very hard on the patient.

While in Berlin, in 1922, I learned that the Seifert instrument was being used successfully in the Charite. I told Dr. Wesely of this on my return, and he immediately ordered one of Seifert's instruments. We used this for a good while, with great satisfaction. The main instrument is the same as the modified Killian, except that instead of suspending the patient, the counter-pressure comes from the chest. Soon afterward Haslinger set out to devise something simpler, and this instrument that Dr. Israel has shown, is the result of many changes and modifications.

I've had a great deal of experience with this instrument. I use it very frequently. In my opinion, it opens a new epoch in the field of laryngology. It makes laryngoscopy a very simple procedure, and I would just as soon examine a larynx with it as with a mirror. I always start out with the Haslinger, but sometimes I have to fall back on the Seifert. Some

patients, no matter how thoroughly the throat is cocainized, cannot stand the pressure on the hypopharynx. Again, when you operate, the Haslinger does not offer you enough space to work, because the distance between the blades is fixed; whereas, in the Seifert, the space can be widened as much as the patient can stand.

Dr. Israel (closing): I have had experience with the Seifert instrument and with Lynch's modification of the Killian instrument. Many times the patient has had to pay the penalty for the increased amount of working space in the form of displaced teeth, broken jaws, etc. In the Seifert instrument, pressure against the tongue is accomplished by counter-pressure on the chest wall. With Haslinger's instrument there is not so much space, but a certain amount of safety is afforded. There is no chance to do any damage to the patient's teeth or jaws. We are not restricted in working space by the instrument, for the amount of working space is governed entirely by the size of the larynx.

If you have a working space the same size as the larynx, that is all that is necessary. Bronchoscopists have enough space, when it is remembered that it must be anesthetised, which is very important. Sufficient local anesthesia must be had and there should be no difficulty at all in producing it. Preliminary injection of morphine and atropin, plus topical application of cocaine, is sometimes not sufficient. In such a case, light general anesthesia will accomplish the purpose.

INTRACRANIAL HEMORRHAGE IN THE NEWLY BORN—REPORT OF A CASE WITH RECOVERY.*

BY

DR. JAMES H. PARK, JR., M. D.,
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Intracranial hemorrhage in the newly born occurs with much greater frequency than is commonly supposed. One is surprised to find the scant attention given to the subject in most of the modern text books.

It is interesting to note that Chas. West[1], in referring to the condition in 1850, stated that:

"Cerebral hemorrhage in childhood is oftenest met with immediately after birth; and no circumstances can be imagined more favorable to its occurrence than those which then concur to produce it. The tumid scalp and livid face of many a stillborn infant point to one of its most important causes, since they are but a measure of that extreme congestion of the vessels within the skull, that has at length ended in a fatal effusion of blood upon the surface of the brain.

There would be reason to fear that this occurrence had taken place, if an infant, when born, were to present great lividity of the surface, and especially of the face; and if the heart were to beat feebly and at long intervals, although the pulsations of the cord were slow and faint or had altogether ceased. Under these circumstances death sometimes takes place without any effort at respiration being made, but at other times the child breathes irregularly, imperfectly and at long intervals. The hands are generally clenched and spasmodic twitchings are of frequent occurrence about the face, or these twitchings are more general, and more severe, and almost amount to an attack of convulsions. The symptoms, however, are by no means uniform, and probably are in some degree modified by variations in the seat as well as in the quantity of the effusion, for it sometimes happens, even in cases where a very large quantity of blood has been poured into the arachnoid cavity, that the breathing is little or not at all disturbed, and that after living for a few hours in a state of weakness and torpor with chilliness of the whole surface, the child dies without any sign of convulsion."

During the past few years interest in this condition has increased, as denoted by the numerous writings on the subject.

Sharpe and Maclaire[2], in a very recent contribution to the literature of the subject, quote Warwick's[3] summary of a necropsy report on hemorrhage in the newly born, as follows:

1. "Cerebral hemorrhage of the newborn is frequently found, occurring in 50 per cent of the thirty-six fatal cases of young infants at the University Hospital.
2. "The condition is brought about by trauma in normal or rapid deliveries, by congestion or asphyxiation in slow deliveries, or by disease of the child itself.
3. "Hemorrhagic disease of the newborn is a very important cause of cerebral hemorrhage in infants, occurring in forty-four per cent of deaths in our series.
4. "Forceps deliveries, advanced age of the primiparous mothers and syphilis, probably do not play as important a role in the etiology of this condition as was formerly supposed."

Sharpe and Espigo[4], in a series of lumber punctures done on one hundred consecutive newborn babies within the first forty-eight hours, found intracranial hemorrhage in nine per cent, all of which occurred in so-called normal deliveries.

A second study was undertaken by Sharpe and Maclaire, to detect apparently signless hemorrhage in the newborn, with the result that thirteen per cent of one hundred consecutive deliveries at the New York City Hospital were found to have intracranial hemorrhages of varying degree, by routine lumbar puncture within fifty-three hours after birth.

CLASSIFICATION.

Warwick has proposed the most logical classification of intracranial hemorrhage, based upon etiology, in lieu of the older classification, according to location of the hemorrhage, namely, supra and infra-tentorial. Munro and Eustis[5] favored the classification of Warwick, and based the treatment of the cases coming under their obser-

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

1. West, Charles: "Lectures on The Diseases of Infancy and Children," 1850 (Lea & Blanchard, Philadelphia).

2. Sharpe, W. H., and Maclaire, A. S.: Surg., Gyn. and Obstet., Feb., 1924, p. 200.

3. Warwick, Margaret: Am. Jour. Med. Sc., 1919, Vol. cviii, p. 95.

4. Sharpe, W. H., and Espejo, G J.: Jour. A. M. A., Vol. lxxxi.

5. Munro, Donald and Eustis, R. S.: Am. Jour. Dis. Child., 1922, Vol. xxiv, p. 273.

vation upon a modification thereof. Their classification is as follows:

1. Traumatic group—hemorrhage caused by excessive moulding of the head and overriding of the sutures.

2. Asphyxia group—hemorrhage caused by excessive cerebral venous congestion with rise of intracranial pressure.

3. Fetal disease group—the hemorrhage in these cases having no relation to labor, but being most commonly caused by hemorrhagic disease and, rarely, by syphilis or other toxemias.

The objection raised to the older classification which has been adopted by most authors writing on the subject, was that many cases coming to the autopsy table showed hemorrhage in both localities.

CLINICAL MANIFESTATIONS.

Such typical symptoms as failure to nurse properly, or not at all; fretfulness; irritability and crying, or listlessness; cyanosis; shrill cry; paralysis; twitchings, convulsions, nystagmus, and tense or bulging fontanels, may all be present or absent, according to the peculiarity of the individual case.

John Foote[6] has stated that the commonest cause of cyanosis in the newly born is intracranial hemorrhage and not congenital heart-disease, as so many suppose. Typical cases of supra-tentorial hemorrhage usually exhibit irritability, restlessness, crying, and later, cyanosis, twitchings and convulsions. The fontanell may be bulging in varying degrees. If unrecognized and untreated, medullary edema occurs and symptoms of infra-tentorial hemorrhage arise.

In typical infra-tentorial or basal hemorrhage, the symptoms are, listlessness, cyanosis, and respiratory and circulatory disturbances. The fontanel may or may not be bulging; usually it is not bulging. No matter what the cause or the location of the hemorrhage, there is always an increased intracranial pressure, which can be determined by the spinal mercurial manometer. This increased pressure is, in the opinion of many observers, of more importance than the hemorrhage itself, and treatment should be directed toward its relief. The average normal spinal manometric pressure varies from four to ten millimeters of mercury. The diagnosis rests upon the history and physical examination, the recognition of intracranial hypertension, and the information afforded by the blood coagulation and bleeding-time tests.

Sharpe and Maclaire found in their series of cases, that lumbar puncture as a diagnostic and therapeutic agent, was a safe procedure in the absence of shock, and advocate it in suspected cases having the mildest signs of intracranial hemorrhage and cerebral edema.

The prompt recognition and intelligent treatment of intracranial hemorrhage, will save numerous infants' lives, and will prevent, or at least greatly diminish, the number of cases of idiocy, cerebral hemiplegias and diplegias, and other nervous disorders which become manifest in later childhood as remote consequences.

TREATMENT.

In all cases of intracranial hemorrhage the successful treatment depends, according to Munro and Eustis, "Primarily on the successful etiologic classification of the individual case, and secondarily, on the recognition and treatment of the increased intracranial pressure that is present in every case."

In the cases of hemorrhagic disease, horse serum or, better still, whole human blood, should be injected either intramuscularly or intravenously. Where the latter method is chosen an homologous donor must be selected. Once the bleeding is controlled, the treatment should be directed toward the relief of the increased intracranial pressure.

I have seen fifteen cases of intracranial hemorrhage in private practice, and in consultation, during the past two years, a typical case of which is reported. This case falls into the "hemorrhagic disease group," and apparently recovery has been complete.

CASE REPORTS.

Baby J. T. G., Jr., was born at 11:25 p. m., December 1, 1923, with the aid of low forceps. The total duration of the labor was 6 hours and 40 minutes. This was the mother's second pregnancy, the first child having died shortly after birth, presumably from intracranial hemorrhage. His condition at birth was good, no resuscitative measures being necessary. His birth weight was 7 pounds and 4 ounces. He was apparently normal in every respect, save for minor forceps injuries to the scalp until 5 p. m., December 2. At that time the nurse noticed that ten minutes after nursing the infant became cyanosed about the face, gave a shrill cry, and the facial muscles of the right side began to twitch. Soon afterward the cyanosis became more general and the left arm and leg also began to twitch.

When I saw him, at 5:30 p. m., he was cyanotic, mild opisthotonos was present, the fontanels were tense, and there was twitching of the right facial muscles, and left arm and leg. The head was drawn to the right and bilateral nystagmus was present. There was a small effusion of blood over the right parietal bone. Ten c.c. of blood-tinged spinal fluid, under pressure, was removed. The spinal manometric pressure was not determined, as a manometer was not available at the time. Previously, twenty c.c. of whole blood, obtained from the father, was injected intramuscularly. The blood-coagulation test showed a clotting time of 10 minutes. The bleeding-time was not ascertained. The urine revealed nothing worthy of note.

6. Foote, John: "Intracranial Hemorrhage in the New-Born," South. Med. Jour., Vol. xvii, p. 6.

The following orders were given: (1) Place in a quiet, darkened room; (2) apply light ice-cap to head continuously; (3) give boiled water freely, with medicine dropper or Breck feeder; (4) not to be put to breast until so instructed; (5) give sodium bromide, gr. 2, every three hours until relaxed, then every four hours; and (6) as soon as mother's milk supply becomes established, give one and one-half to two ounces of equal parts of breast milk and boiled water, every two and one-half hours during the day, and every three hours during the night.

The progress notes follow: December 3, the baby had no severe convulsions during the night. He slept very little, however. Minor twitchings of all the facial muscles and of both arms and legs, lasting from three to fifteen minutes, occurred at twenty to thirty minute intervals during the night. Twenty c.c. of his father's whole blood was injected intramuscularly at 8:00 a. m. During the day, cyanosis and spasms occurred at hourly intervals, but did not last as long. The rectal temperature was 98° F. Five cc. of straw colored spinal fluid was removed.

December 4, he had a good night. Minor twitchings and cyanosis occurred at irregular intervals of from thirty-five minutes to two hours. The rectal temperature was 99° F., and the pulse was regular and strong. He looked considerably better. Twenty c.c. of his father's whole blood was injected intramuscularly. The fontanels were level. Minor twitchings occurred at irregular intervals throughout the day.

December 5, during the first part of the night the twitchings were more marked, but the child was quiet for the remainder of the night. His color was excellent in the morning. The anterior fontanel was level, soft and easily depressed. Twenty c.c. of the father's whole blood was injected intramuscularly.

December 6, there were minor twitchings of the face, arms and legs, with mild cyanosis at irregular intervals, of from two to three hours, during the night, but no twitchings or cyanosis after 4:30 a. m. The baby slept most of the day. Twenty c.c. of the father's whole blood was injected intramuscularly.

December 7, the baby had a good night. He waked twice during the night, but soon fell asleep again. No bromide has been needed since 4:30 a. m., December 6. He acts like a normal baby, taking his feedings eagerly. Twenty c.c. of the father's blood was injected. The blood-coagulation test on this day revealed a clotting-time of 4 minutes. From then on, his progress was uneventful and uninterrupted. He slept well, took his food eagerly, both the breast and complemental feedings, and gained satisfactorily in weight. At four months he weighed fourteen and one-half pounds, and is now apparently in perfect health.

ABSTRACT OF DISCUSSION.

Dr. L. R. DeBuys, New Orleans: When one realizes the amount of pressure that the head of the child is subjected to during labor, he wonders why there are not more brain hemorrhages. It is very true that many birth injuries go unnoticed at first and that the effects are not noticed until the child does not develop as he should in sitting, standing, and walking, and in noticing things. One is impressed when considering birth injuries, that it is unfortunate that more care is not given to the newly-born. An obstetrician from the Northwest recently visited my Service of the Newly-Born. In the course of the conversation, I asked him whether he turned the baby over to the pediatrician promptly at birth. He replied that he did not, but that if anything happened, he called in a pediatrician. I told him that I wished to emphasize the fact that if he allowed the pediatrician to study the normal newly-born, the pediatrician could be of greater service to him when he needed consultation; but that according to his plan, when he called in the pediatrician to help him, that specialist could be of little assistance because of his lack of opportunity to study the normal newly-born.

Dr. Park (closing): I wish to stress the importance of carefully examining every infant within twenty-four hours after birth. In this way, cases exhibiting the mildest symptoms, which are ordinarily overlooked, will be recognized and many lives will be saved. Another thing of importance is the comparative frequency of intracranial hemorrhage in the premature infant. This condition should be looked for in every case.

X-RAY TREATMENT OF DEAFNESS: A PRELIMINARY SURVEY.*

BY

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When used within such limits as are generally prescribed by roentgenologists, the *x*-rays are known to exert a definite resolvent action upon tissue that is dominantly lymphoid in character. This definitely established action is clinically recognized, and forms the basis for the undoubted success that attends the use of the *x*-ray in glandular pathology of whatever sort. Occasionally, the lymphoid element may be relatively excessive in the abnormal tonsil, as a result of an infection. With a view to reducing the hypertrophy of this element, Witherbee and others have introduced the use of the *x*-ray, which is found to exert a desirably beneficial action.

The nasopharyngeal structures are underlaid with a dense lymphoid and lymphadenoid tissue. This tissue is somewhat abundant in Rosenmuller's fossae. By reason of the extensive distribution of this readily infectible tissue, practically any serious bacterial invasion in the nasopharyngeal passage spreads diffusely. There are certain portions of the lymphadenoid structures that bear important relations to the patency, ventilation and blood supply of the eustachian tube. Even a small amount of lymphadenoid engorgement in these strategic locations, the fossae of Rosenmuller, for example, leads to a serious impairment of the normal functioning of the eustachian tube. This impairment is clinically reflected by the subject as impaired hearing. J. J. Richardson of Washington, in his many studies on this important subject, has advanced a method involving the use of what he has called a "sclerolytic dose," which is deserving of much commendation.

Essentially, the sclerolytic *x*-ray dose is one that has for its factors such constants as will deliver to the inflamed lymphadenoid

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structures a sufficient quantity of x-ray to result in a practically complete resolution of the engorgement. Dr. Richardson has recommended the following values: Milliamperes, 5; kilovolts, 80; tube skin distance, 15 inches; filter, aluminum, 1 millimeter, and time, $4\frac{1}{2}$ minutes.

This quantity and quality of x-ray is delivered in such a fashion that the central ray reaches the eustachian tube. The patient reclines ventrally, with the head turned first

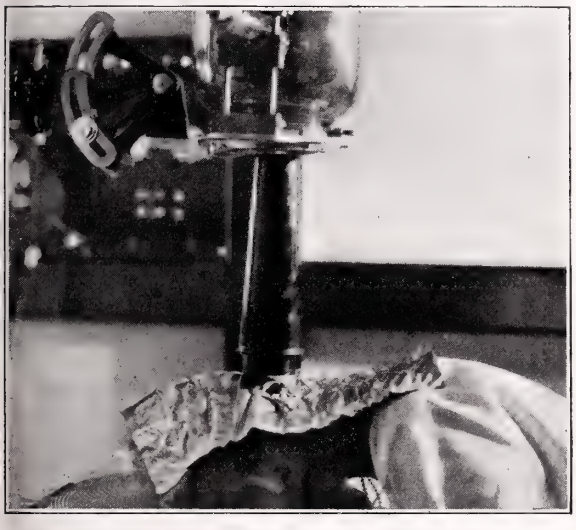

FIG. 1.—Showing position for the sclerolytic dose (same position for each ear).

to the right, where the treatment above outlined is administered, and then, at the same sitting, to the left. If a protective lead foil is used to prevent depilation in hypersensitive individuals, a sheet of metal is selected that will cover the entire head. An opening about two inches in diameter and rather oblong, is made in this metal shield, to embrace the entire pinna, which is the part exposed.

Ordinarily, the response following this treatment is not immediate, but as the lymphadenoid hyperplasia becomes gradually reduced, which is made known to the otologist by the increasing facility with which the tube accepts larger and larger bougies, the hearing is in that proportion regained.

Several days after one of these exposures, it is not unusual for the patient to speak of a marked dryness of the throat. This dryness can be definitely traced to an inhibited cellular secretion. This same dessicating action is probably exerted upon the cells lining the eustachian tube, and on the basis of this effect, the apparently good results attained in the treatment of serous and catarrhal deafness admit of explanation.

Unquestionably, a considerable amount of impaired hearing that is clinically observed can be traced to lymphadenoid pathology. The curette would be valuable but for the scarring that the instrumentation would leave. Galvanic electrolysis is only temporarily valuable, for while it increases the patency at first, there soon follows a cicatrization that permanently damages the areation of the auditory tube, with a subsequent atmospheric imbalance. For the treatment of this very prevalent pathology, therefore, the sclerolytic x-ray dose of Richardson is valuable and conducive of clinically brilliant results.

When the x-rays are used in quantities that deviate much from the values just outlined, there arises a serious question as to the physiological effect that they are capable of imparting to the irradiated structures. Richardson has introduced a neural stimulating x-ray dose, which has for its values the following factors: Stabilized milliamperes, 8; kilovolts, 50; tube skin distance, 24 inches; filter, aluminum, equivalent of 1 millimeter, and time, 12 seconds.

That there is a true cellular stimulation incident to the x-ray seems to be demonstrated in fields other than otology, by the work of Peterson and Saelhof, in their contributions on organ stimulation. Richardson is the first in this country to record a similarly stimulating effect when extremely gentle doses of x-ray are used in the treatment of impaired hearing. He sprays a very soft quality of ray over the entire head, directing the central ray to four arbitrary portals of entry, as follows:

(1) On the left behind the mastoid, the central ray passing in the direction of a line joining the mastoid tip and the sella turcica;

(2) From above, the central ray passing into the skull in the direction of a line joining the anterior fontanell and the sella turcica;

(3) On the right, behind the mastoid, as for the left side.

(4) From behind, the central ray passing along a line joining the occipital protuberance with the sella turcica.

There does not appear to be any satisfactory explanation for the changes occasioned by the neural stimulating dose of Richardson, and at this time, only the clinical effects bear testimony to the fact that definite responses are elicited under certain conditions.

As strange as it may appear, it is practically impossible, with our present knowledge, to anticipate the types of pathology that will or will not respond to the x-ray treatment of impaired hearing. True nerve deafness fails to respond. Deafness ascribed to otosclerotic pathology can sometimes be prevented from advancing, and can even be perceptibly bettered.

Frey and Kriser, of Berlin, in a recent article, state that otosclerosis is an alteration of the bone of the labyrinthine capsule, due to endocrine disorders, especially of the parathyroid glands. The authors attempted to regulate the internal secretion, and also to cause retrograde changes in the pathologic bone growth. For the first purpose they employed large doses; for the latter, small doses. In 15 cases, both old and recent, no increase in the deafness was noted objectively; in most of them the hearing was improved by 20 to 50 degrees for whispering. Subjectively, the patients stated that their hearing had improved, and usually that the head noises had disappeared.

Deafness due to catarrhal inflammation, particularly the varieties attending otitis media, apparently responds promptly, and in

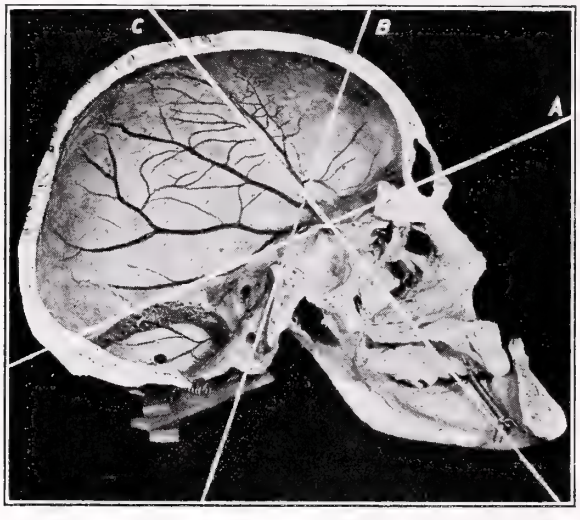

FIG. 2.—Sectioned skull, showing focal point of central rays and direction of principal rays in the different positions for the neural-stimulating dose.

some instances greatly. As Richardson has somewhere reported, what seems to determine whether or not hearing can be improved, is the tuning fork range of audition existing in the patient before *x*-ray treatment for deafness is begun. No matter what the pathology may be, if audition remains for the limits between b' and g," the *x*-ray treatment for deafness is generally followed by some improvement, the improvement being most marked in proportion as the range between b' and g" is perfect. In clinical practice it becomes more and more apparent that a tuning fork evaluation of audition, as well as an audiometer measure of the hearing range, practically always fails to correspond to the re-establishment of hearing, as measured by the spoken or whispered voice.

There seems to be a reasonable explanation for this clinical fact. When a single tuning fork is struck, independently of any associated happening, the sound that it emits is caught and registered in a very limited area of the cortex. When a human voice is sensed, its many overtones, its imperceptible modulations and the myriad living associations

FIG. 3.—Showing a position for neural-stimulating dose (See Axis A, Fig. 2).
FIG. 4.—Another position for neural-stimulating dose (See Axis C, Fig. 2).

that the voice connotes, affect many spread centers of association. Any agent that will stimulate many cortical association-centers, will, therefore, produce a more pronounced effect if tested by a method invoking a response from a number of these centers, as is the case with the spoken voice, as compared to the almost negligible response if the test is confined to an extremely isolated and vaguely identified tonal center, such as a tuning fork might stimulate. Whatever the explanation may be, it is of paramount clinical importance to realize that the spoken voice and the whispered voice is sensed better by patients of hard hearing who have been treated with the *x*-ray. This is not only noticed by the otologist, but becomes definitely appreciated by the patient, who gener-

FIG. 5.—Rays in neural-stimulating dose, passing in direction of line drawn from mastoid tip through sella turcia.
FIG. 6.—Showing another position for neural-stimulating dose (See Axis B, Fig. 2).

ally conducts many domestically devised tests that impress upon him the increased audition for the spoken voice.

Some have thought that the stimulus could be attributed to an activation of the pituitary gland, which is obviously irradiated in conse-

quence of this treatment. Kahn and Richardson have separately mentioned the sense of well-being that I have myself noticed as one of the early manifestations of reaction to the *x*-ray treatment. This sense of well-being, in my own cases, has probably been more marked in the female patients, not married, at or about the age of 40, and who showed definite symptoms of nervous instability that could be traced to an endocrine shock, possibly in anticipation of the preclimacteric gonad reorganization.

I have likewise observed a brilliant result in the treatment of an adolescent school-girl who, in addition to a gain in hearing, demonstrated an improved mentality to the point where her former scholastic dullness was exchanged for a high attainment in her examinations and accomplishments, within six weeks of the initial treatment. I do not accept completely the thought that the pituitary is wholly responsible for the enlivened functions. We should not be unmindful that the extremely soft *x*-ray used in the neural stimulating dose, played upon the skin of the face, can very definitely stimulate the pilosensory termination of the sympathetic nervous system; and that these stimulations can be reflected back through the various branches of the vegetative neural tree, so as to promote the functional activity of all the organs. In support of this contention, it will be appreciated that the *x*-ray increases the clotting time of the blood when administered over the spleen, though the clotting time is also increased if the *x*-ray be displayed on any portion of the body. In some of his earlier experiments, Richardson discovered that the neural stimulating dose sprayed over the skin of the chest, or the back, resulted in the same feeling of well-being that is obtained when the *x*-ray is directed to the pituitary.

I can best illustrate certain clinical findings by reference to a number of typical cases that have been submitted to the *x*-ray treatment. The series upon which my studies are based at present involves 27 cases of otitis media, chronic catarrhal. The majority are women, ranging in age from 20 to 59 years. In practically all of the cases, there was observed a loss of hearing for the low pitched forks, an occasional case showing islands of deafness in the higher pitched forks. The spoken voice was detected by some at 3 inches, and varied to a maximum of 20

TABULAR REVIEW OF CASES.

Case No.	Age	First Sclero Dose	Voice Right Ear	Voice Left Ear	Date Last Test	Voice Right Ear	Voice Left Ear	Remarks
1	35	1/29	27 ft.	9 ft.	4/28	80 ft.	80 ft.	Watch test for left ear: 1/29, 5 in.; 4/28, 9 in.
2	20	1/21	10 ft.	3 ft.	3/25	38 ft.	10 ft.	Rinne neg. bilateral. Tubes patent, 2/11; immediate disappearance of tinnitus after first sclerolytic. Watch on contact, 3/25.
3	44	3/26	12 ft.	45 ft.	4/10 4/28	30 ft. 52 ft.	45 ft. 90 ft.	Watch test, 3/26: Right, 2 in.; left, 8 in.. 4/28: Left, 8 in.; right, 17 in.
4	40	3/20	2 ft.	6 in.	4/7 4/28	24 ft. 25 ft.	12 ft. 8 ft.	O. M. C. C. 20 years. 4/28, tinnitus goes away and returns at intervals. Tonsils should be removed.
5	19	1/18	20 ft.	12 ft.	3/17	40 ft.	40 ft.	Watch test, 1/18: Right, 1½ in.; left, 1 in. Improvement in mental condition, which was very noticeable in school.
6	28	1/26	20 ft.	9 ft.	1/30 3/15 4/28	 40 ft. 57 ft.	36 ft. 40 ft. 44 ft.	Watch test, 4/28: Right, 20 in.; left, 10 in. Test made 3/15 demonstrated that patient could use left ear for receiving telephonic communications.
7	32	1/5	20 ft.	00	1/22 4/10	30 ft. 30 ft.	1 in. 40 ft.	Otosclerosis.
8	57	1/28	30 ft.	8 in.	4/10	40 ft.	7 ft.	Orthodox treatment for years of no avail, most distressing tinnitus aurium.
9	27	1/29	18 ft.	40 ft.	4/10	50 ft.	50 ft.	Orthodox treatment no avail. Diagnosis: Mixed deafness and tinnitus for many years.
10	21	1/12	18 in.	5 in.	2/28	60 ft.	60 ft.	O. M. C. C. Orthodox treatment of no avail. Test made 4/10 shows tinnitus disappeared.
11	75	3/18	19 ft.	19 ft.	4/2 4/21	30 ft. 60 ft.	30 ft. 60 ft.	O. M. C. C.
12	36	3/2	30 ft.	9 ft.	4/10	50 ft.	50 ft.	Uusual orthodox treatment followed immediately by *x*-ray.
13	51			2 in.	4/10		4 ft.	Orthodox treatments for years of no avail. Patient reported recently that she had gone shopping without wearing her audiphone, which she had not been without for years. She is now able to use telephone.
14	35	3/18	40 ft.	9 ft.	4/10	45 ft.	45 ft.	O. M. C. C. past 6 years in left ear. Disappearance of tinnitus aurium and marked sense of well-being outstanding features in this case.
15	32	1/1	8 ft.	4 ft.	4/21	82 ft.	82 ft.	Diagnosis: Marked endocrine imbalance. This case had received no benefit from the treatment up to April 1, 1924. Her general attitude and health had shown no improvement on that date, and it was doubtful whether she would be one of the 60 per cent who would be benefited. She reports a marked sense of well-being, and that the tinnitus fluctuates in proportion to the atmospheric pressure.

feet before treatment. Every case received initially the sclerotic *x*-ray dose, which was followed every day for two weeks with neural stimulating doses. After the second week, the neural stimulating doses were discontinued for two weeks, at which time a second sclerolytic *x*-ray dose was given. The neural stimulating dose was again continued every day for two weeks, when, following a two-weeks' rest period, the third sclerolytic *x*-ray dose was administered.

In about the middle of this course of treatments, it was generally found that the eustachian tubes admitted bougies of greater diameter, so that one of the observed effects is an actual increase in the patency of the eustachian tube which had heretofore been closed. In this particular series, the symptoms of tinnitus aurium was not an outstanding characteristic. One patient had had tinnitus since 1918. She had failed to respond to any of the orthodox treatments over a period of five years. After this time, I eliminated all orthodox measures and submitted her entirely to *x*-ray treatment. Her hearing improved, and after the second sclerolytic *x*-ray dose, her very stubborn tinnitus was dispelled.

With the exception of one case, a woman who showed a unilateral nerve deafness, the remaining 26 cases have all registered an improved hearing, amounting from 20 per cent to 100 per cent betterment, for the spoken voice. Tuning forks and watch ticks have not made an appreciable change. The improvement for the spoken voice is definitely and certainly noted by all of the patients outside of the otologist's office, so that the element of the otologist's test is entirely excluded from their demonstrable gain. A tabular review is subjoined, covering the essential features of this series of cases.

There are two striking characteristics that are worthy of particular mention in connection with the cases comprised in this study. First, all of these cases had been receiving orthodox treatment in my office and elsewhere for periods of time varying from one to five years, without any gain in their ability to perceive the spoken voice. In the next place, the only treatment used was the sclerolytic and the neural stimulating *x*-ray doses, in which I differ radically from the reports previously submitted by Dr. Richardson, who used all the orthodox measures and employed the *x*-ray treatment, simply as an adjuvant measure. There can be no doubt that, used as an adjuvant, the *x*-ray treatment of Richardson is fraught with excellent clinical results; and from the series just reported, it stands undisputed that a large share of the gain must be attributed to the action of the *x*-ray—whatever that action may be.

ABSTRACT OF DISCUSSION.

Dr. J. M. Woodson, Temple: This is a very interesting subject to all of us. At first I felt very skeptical as to Dr. Richardson's results in the 600 cases he reported. Later, I began to use his treatment in selected cases, and I believe there has been some benefit. Of about thirty cases that I have treated, eight have received decided benefit, others show improvement, and others no benefit whatever. The first result is improvement in the tinnitus. One patient, a teacher, stated that after the first treatment she did not have tinnitus for two days, and that when it did return, it was greatly diminished. It had been like the escape of steam from a locomotive, but after treatment, it was about like the escape of steam from a teakettle. She has noticed a decided improvement in her hearing. Another patient said he thought his tinnitus was increased. Dr. Richardson says he does not know the cause of improvement unless it is the stimulating effect in a certain percentage having improved within the past two months. On my advice, some have quit treatment because of no improvement. Many of our best methods were at first used empirically, but are now established practices. This treatment should be attempted only by those accustomed to the use of the *x*-ray, because of the harm which may be done.

Dr. R. T. Wilson, Temple: It is our belief that the stimulating *x*-ray dose is too mild for any perceptible effect. We follow Dr. Richardson's technique in the dosage, repeating these treatments every two weeks until two of the six treatments have been administered, with the results that Dr. Woodson has just recited. The sclerolytic is very close to the erythemic dose, and therefore it should be cautiously administered, as erythema is not desirable. We use a small port of entry, screening off the head with leaded rubber, except a small opening ½ to 2 inches square, the center of which is about 1 inch above and in front of the external auditory meatus. This will reduce the danger of erythema to a minimum and protect the patient's hair as well as insuring that effective dosage is delivered where it is most desired. The small opening in the protective screen also minimizes the reaction in the salivary glands. In some early cases we did not observe this precaution and had considerable temporary swelling of the salivary glands, which was somewhat unpleasant for a few hours.

Even though 60 per cent or less of improvements are received, it will be a great boon to those unfortunate patients. People whose hearing is impaired or who have head-noises are generally anxious for any remedy which offers hope for relief. The cases that respond most readily to this type of therapy are those in which the lymphoid tissues are responsible for the symptoms. It is a well known fact that the lymphoid tissues give a ready response to radiation, as in the radiation treatment of tonsils. We have seen many patients whose tonsils have been removed, relieved by *x*-ray treatment of the throat in a persistent nasopharyngitis. If Dr. Richardson has given relief in even a small percentage of cases of impaired hearing and head-noises, he has made a great contribution to society and to medical science.

Dr. M. E. Gilmore, Fort Worth: I am not a specialist, but I want to testify to some of the benefits Dr. Warwick's patients have received, other than improved hearing. Most of these patients show more or less mental depression because of their affliction; to them it is a real affliction, and not

simply a defect. The younger patients are usually mentally subnormal. They all show increased mental acuity and have a different outlook on life, after treatment. One patient, a girl of 18, had always done poor school work and was irritable at home. She left the public school in the eighth grade and took a course in a business college. Her work there was unsatisfactory until she began treatment. She then became an average pupil, and is now doing satisfactory work. The change was so marked that the teachers inquired the cause. Her hearing shows only moderate improvement at this time, but her mental condition has improved 100 per cent.

I think the so-called stimulating doses are valuable in helping to re-establish the tone and function of the defective auditory nerves, while at the same time there is a stimulating effect on the thyroid, parathyroid, pituitary and pineal glands. One cannot otherwise explain the sense of well-being noted by the patients themselves.

A point of interest to me has been the early fatigue these long unused nerves show. An ear that responds well at 10 or 15 feet, may suddenly become deaf after a few minutes test, only to recover after a period of rest.

One patient confessed that she often asked for a statement to be repeated, out of sheer force of habit. These patients often hear more than they register and become self-centered and inattentive.

Dr. Davis Spangler, Dallas: I have had no experience with the *x*-ray in deafness, but some with radium treatment. A baby suffering from three-fourths idiocy and unable to hear and speak, improved under radium treatment until he is now about one year behind normal.

Dr. J. M. Britton, El Paso: I have had no experience in this ear proposition, but in our high, dry atmosphere, I have a great many patients with chronic follicular pharyngitis. I have an *x*-ray laboratory give four treatments at two-week intervals, and the patients are definitely benefited. It looks like this treatment would do good in opening the eustachian tube.

Dr. Warwick (closing): I want to express my appreciation of these discussions, especially on the part of the *x*-ray men. Dr. Richardson reports about 60 per cent improvement. I hope that at the next meeting we will hear from a number of others who have had some experience with this treatment.

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STERILITY, ITS CAUSE AND TREATMENT.*

BY

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Sterility in woman is defined by Child of New York, as her inability to reproduce her kind. It is classified by him as follows: (1) Primary; (2) secondary; (3) congenital; (4) acquired, and (5) functional.

Briefly, pregnancy results when the ovum is fertilized by the spermatozoon, the latter being introduced through the vagina, and by its own flagellate movements reaching the ovum, either in the cavity of the uterus or in the fallopian tube. Ovulation takes place in woman at different periods throughout the month, and occurs when the ovum, gradually increasing in size, forms a graafian follicle, which reaches the surface of the ovary and ruptures. The ovum being thus freed in the peritoneal cavity, is induced by the fimbria of the tubes to enter the tube on its way to the uterus. Ovulation may occur coincidentally with menstruation; it may also occur at any time, independently of the menstrual epoch. The events which take place upon fertilization of the ovum are well known and are not within the scope of this paper, which treats of the reasons why fertilization does *not* take place.

Any condition preventing the conjunction of the spermatozoa and the ovum causes sterility. I can see no reason for an elaborate classification, and believe all cases come under one of the following three heads: Primary, including congenital defects or acquired conditions occurring in the nulliparous; secondary, all cases of acquired defects occurring in multiparous woman, and functional cases of sexual incompatibility.

Congenital defects, such as absence of the uterus, tubes, or ovaries, are cases of absolute sterility, and are not amenable to treatment. A pin-hole os is not in itself a cause of sterility, as spermatozoa can pass through the smallest aperture the uterus presents; but due to the fact that such an os is so readily plugged by mucus, it favors sterility. The same is true of chronic endocervicitis, in which the thick, glairy mucus enmeshed the spermatozoa and so prevents fertilization.

Malpositions of the uterus may be the cause of either primary or secondary sterility, dependent upon the time of its occurrence. Anteflexion is not considered by many a displacement, and is not a cause of sterility because of its angle of flexion, but it occurs in a faulty or incompletely develop-

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924.

ed uterus and when pregnancy does take place in such a uterus, an abortion at five or six weeks usually follows. The abortion is due to the ovum growing more rapidly than the uterus. Such an abortion, however, really serves to develop the uterus by stimulation of contractions and subsequent pregnancies go on to term. Conception rarely takes place in infantile types of uterus.

Opinions vary as to the part played by retroversions and retroflexions, in sterility. I believe these displacements are a potent cause of sterility. Their frequency is a strong argument for the evolutionary theory that woman's forebears were on four feet, as only in this posture can the uterus assume a position in which displacement is impossible, the organ lying naturally on the anterior abdominal wall, gravitating towards the diaphragm, putting no strain on the round ligaments, and placing the cervix in a position to aid spermatozoal entrance by gravity. Since, however, woman has elected to assume the erect position (and we of the opposite sex much prefer her that way), she must have her retrodisplacements, prolapses, etc., and we must try to prevent them, or correct them when they occur.

The uterus is supported by two broad ligaments, two utero-sacral ligaments, two round ligaments and two transverse cervical ligaments. The prevalent idea that the perineum is a necessary support, is probably incorrect, as many complete retroversions occur in the nulliparous. It is true that perineal lacerations and retroversions are often associated, but they are due to the same cause. Laceration of the levator ani allows the rectum to bulge through the separation, and the constant drag pulls the cervix into the axis of the vagina, causing retroversion. The important uterine supports are, the utero-sacral ligaments holding the cervix back, and the round ligaments holding the fundus forward.

The mechanical factors helping to produce retroversion are, habitual overdistention of the bladder, falls in a sitting posture, horseback riding, subinvolution after confinement, and long periods postpartum in the dorsal prone position. Child believes congenital retrodisplacements should be corrected early, regardless of symptoms, so that permanent damage may be prevented. I have found that a most frequent cause of retroversion in the nulliparous is due to horseback riding, and falling of the buttocks. A women with a retrodisplaced uterus may conceive, and even go to term, but this is not usual. If conception occurs, it is frequently followed by abortion about the third month.

By far the most important cause of secondary or acquired sterility is gonorrheal infection. This infection causes sterility from Bartholin's abscesses, with resultant dyspareunia; from endocervicitis, the discharge entangling the spermatozoa; from sealing the tubes; from perioöphoritis, the adhesions preventing ovulation, and by infecting ruptured graafian follicles, with resultant abscesses and destruction of the ovary. Statistics show that 50 per cent of pelvic disease is due to gonorrhea, and 25 per cent of childess marriages are due to the same cause.

Under acquired sterility fall cervical lacerations, which may sterilize by virtue of mucous plugs, or if conception occurs abortion follows by reason of lack of cervical support of the ovum. Ovarian sterility will occur in any instance where a perioöphoritis occurs, because of thickening of the capsule or the formation of external adhesions, preventing the escape of the ovum. Fibroids are a common bar to conception, or a cause of abortion if conception occurs. Subinvolution as a cause of sterility is usually due to infection. Tuberculosis, syphilis, various endocrine disturbances, and chronic debilitating diseases, frequently result in sterility.

Under functional causes fall the following: Cases of vaginimus; imperfect sexual relations; some anatomical obstruction, and incompatibility of sentiment. Sexual gratification in the woman is not necessary to conception.

TREATMENT.

Before any attempt is made to treat the woman, the fertility of the male should be proven. In all cases of sterility reporting at the Fort Sam Houston Hospital, we first instruct the patient to cleanse the vagina with warm salt solution, have sexual intercourse and return to the hospital within an hour thereafter. The male secretion is then recovered from the vagina and examined under the microscope, on a warmed slide. If the spermatozoa are numerous and actively motile, the male is considered fertile. If the spermatozoa are inactive, the vaginal reactions are determined and any acidity corrected by a neutral or alkaline solution. The male secretions are examined at another time. If the spermatozoa are again inactive or absent, the male is considered nonfertile, and an attempt is made to improve his general condition.

When the male is found to be fertile, we make a pneumo-peritoneum test of the female, by passing oxygen gas through a special apparatus into the uterus and taking an *x*-ray picture, which, if the tubes are patulous, will show a small gas bubble under the diaphragm. (Major Tucker examines the

secretions and makes the pneumo-peritoneum tests.) Having determined the fertility of the male and the presence of patulous tubes in the female, we direct our attention to the relief of the sterility.

A pin-hole os is best treated by dilatation and gentle curettage. Chronic cervicitis and endocervicitis are treated by dilatation, gentle curettage and local treatments by tampon, or the application of various medicines to relieve the catarrhal condition. Anteflexion is treated by dilatation and curettage, followed by packing of the uterus to stimulate contractions with the resultant development of the uterus. Most authorities condemn the use of stem pessaries to straighten the uterus. Infantile types are treated as for anteflexion.

Retrodisplacements may be temporarily corrected by pessaries. We do not use them in the Army, on account of frequent changes of station, causing the patients to be away from our supervision. We, therefore, correct the retrodisplacement by suspension. The operation that I prefer is a modification of the Webster-Baldy, the modification consisting in overlapping the right and left round ligaments behind the uterus, fastening them together without constriction, and then suturing this posterior band to the middle third of the body of the uterus. I have had occasion to examine many women after confinement, upon whom I had previously operated in this manner, and the uterus was still in good anterior position. When there is both a retroversion and a prolapse, I pass the round ligaments through the recti muscles and fascia, and fasten the loops to each other in midline, a modification of Crossen's method.

While admitting that laceration of the perineum is not responsible for retrodisplacements, I always repair them if they exist, before suspending the uterus. I believe a markedly relaxed perineum plays an important part in sterility, by reason of the facility with which seminal secretions escape.

Cervical lacerations, on account of their tendency to permit abortions due to lack of support of the ovum, should be repaired early after their occurrence, providing cervical amputation is avoided during the child-bearing period. I believe it is a mistake to advise a woman to let lacerations alone until after she has given birth to the number of children she desires. She is thus often permitted to become a neurotic, complaining, semi-invalid, with chronic cervical inflammation and its irritating discharge. There is no more reason for delaying repair in such cases than for telling a man to let a hernia go until after he passes the active period of his life.

The treatment of gonorrhea and its complications in woman, is too large a subject to be covered in a brief paper, and I shall only mention a few points, one of which is the proper time for operation in tubal infection. I question the advisability of operation during the acute stages, as advised by a number of able gynecologists. I am satisfied that some of the cases of tubal infection subside without forming pus-tubes, and some without even sealing the fimbriated ends. It is true that by waiting for the acute symptoms to subside, the ovary may be lost by abscess, yet the opportunity of helping the woman to retain her fertility is much better in the quiescent stage than during an acute attack.

Many cases subside with no other damage than sealed fimbriated ends, and these can be successfully and permanently opened. A number of surgeons have successfully opened and irrigated old pus tubes, and have been rewarded for their effort by a child in an otherwise childless woman. I believe that the late Dr. George H. Lee, of Galveston, has had several such cases. If pus tubes are removed close to the uterus, the operation should be completed by removing the uterus. This will cure the patient and prevent future operations, and at the same time remove a useless and, frequently, infected organ.

Perioöphoritis is treated according to the conditions present, by release of the ovary from adhesions, or by decortication. General systemic diseases are given the indicated treatments.

Sterility due to functional causes must be treated according to the condition present. Vaginismus is treated by dilatation, local and general medication, and by psychical means, as this condition is usually a nervous manifestation of fear, the result of mal-education and prudish ideas, without true anatomical defects. Imperfect sexual relations are relieved by instruction, anatomical obstructions by correction, and incompatibilities of sentiment by the Judge.

In closing, I might state that I have carried on my records for the last four years, 72 cases as primary sterility. Each of the patients had been married from two or more years without conceiving. Following various operations, nine have been delivered of full term babies, one has aborted, and five are now pregnant, giving to date, 20 per cent of successful results in those cases of which I have records. I am certain there are several more successful cases, the patients having removed to other stations.

I have had 161 patients for whom I have done a suspension operation, mostly on account of the symptoms produced by these displacements, and occurring in women who had given birth to one or more children prior to the operation. Some of these were performed on women following the removal of the tubes. Two of these women had aborted several times before the operation, and within a few months after the operation they became pregnant and went to term. Seven women conceived so promptly after the operation that it is apparent that the operation increased their fecundity.

Another interesting fact is the small number of sterile men we have found in the Army. Of those whose secretions have been examined, Major Tucker reports only one with aspermia and one with non-motile spermatozoa. Statistics prepared by civilian physicians show a rather high percentage of sterile men.

ABSTRACT OF DISCUSSION.

Major P. S. Tucker, Fort Sam Houston: It has been very interesting to assist Colonel Metcalfe in his work on this subject. He has surprised you, perhaps, by the amount of gynecological work he has done during the past three years. It may interest you to know that there is an active obstetrical service at Fort Sam Houston. During 1923, 260 women were delivered there—an average year.

Nothing is more gratifying than to be successful in the treatment of a sterile woman. Colonel Metcalfe has had some striking results already, a tribute, first, to his interest in the subject (a matter quite outside of his assigned duties); and second, to his careful and logical analysis of the factors found in each individual case. I feel sure that the percentage of his successes would be larger were it possible to trace all of the patients he has treated.

Dr. Robert Johnston, Houston: Inflation of the tubes is an important diagnostic method. Some cases of imperforate tubes are due to appendicitis, in which there has been some peritonitis. The tubes should be insufflated in all suspension operations, to increase fertility.

Lt.-Col. Raymond F. Metcalfe (closing): As to appendicitis causing sterility, any inflammatory pelvic condition can produce adhesions occluding the ends of the tubes, with a resulting sterility.

Perioöphoritis from any cause will also cause sterility by preventing the discharge of the ovum. The condition can be in a measure corrected by decortication of the ovary and release of external adhesions around the ovary and the ends of the tubes. The outer third of the tubes may be cut off and the stumps sutured open, close to the ovaries.

This operation for the correction of sterility may be done at the same time that the retroversion is corrected.

Mead's Powdered Protein Milk.—A milk preparation having a relatively high protein content and a relatively low carbohydrate content. Each 100 Gm. contain approximately protein 37 Gm., butter fat 31 Gm., free lactic acid 3 Gm., lactose 19 Gm., and ash 4.6 Gm. When suitably mixed with water, powdered protein milk is said to be useful for correcting intestinal disorders of infants and children. Mead Johnson & Co., Evansville, Ind.

MISCELLANEOUS

THE DOCTOR.

Who works from morn till set of sun,
The whole day long is on the run,
And yet, whose work is never done?
The Doctor.

Who's roused up in the dead of night,
By someone in a dreadful fright
Who's sure she's going to die outright?
The Doctor.

Who, when the days are broiling hot,
Can seek no cool sequestered spot,
Because he must be on the trot?
The Doctor.

Who, when the mercury is low,
Long, weary miles must often go
Through cutting winds and blinding snow?
The Doctor.

Who has to hear the countless ills,
And deal out multitudes of pills
To those who never pay their bills?
The Doctor.

Who must not show that it's a bore,
To hear each family history o'er
Five generations back or more?
The Doctor.

Who should be placed among the saints,
With whom History us acquaints,
For patient listening to complaints?
The Doctor.

—*Dorris Perry*, Houston, Texas.

EXPERIMENTAL SCARLET FEVER.

A nurse who was taking care of a patient with scarlet fever acquired the disease in a mild but typical form. Two days before the onset of symptoms, she noticed that she had a sore finger. On the second day of the disease, when the rash was intense, a few drops of pus were obtained from the lesion on her finger. George F. Dick and Gladys Henry Dick, Chicago (*Journal A. M. A.*, Oct. 6, 1923), made cultures of the pus and found a hemolytic streptococcus and a diptheroid bacillus. An apparently pure culture of the streptococcus was obtained by plating out single colonies. During the two months following its isolation, no organisms other than the hemolytic streptococcus were demonstrated in this culture. Five volunteers were inoculated by swabbing on the tonsils and pharynx four-day-old cultures of the hemolytic streptoccus grown on sheep's blood agar slants. Three of these experiments were entirely negative. In one volunteer the inoculation was followed by a sore throat and fever without a rash. The fifth volunteer, who had been inoculated with the hemolytic streptococcus after it had been grown on artificial medium three weeks, developed typical, mild scarlet fever. During the second month after its isolation, filtered cultures of the hemolytic streptococcus were inoculated into five volunteers. During the ten or twelve days that followed the filtrate inoculations, all of these volunteers remained well. They had no sore throat, fever or rash. On the eleventh day following inoculation with the filtrate, four of the volunteers were inoculated with an unfiltered four-day-old culture of the hemolytic streptococcus. After this second inoculation, two remained well without any evidence of scarlet fever. One complained of some general malaise and sore

throat fifty-four hours after inoculation with the unfiltered culture. The temperature by mouth was 100 F. The anterior pillars of the fauces were reddened, and the tonsils were somewhat swollen. There was no rash on the palate or on the skin. The next morning, the temperature was 101.4. The throat was still red, but there was no rash. During the afternoon of that day, the temperature fell to normal. There were no further symptoms. One volunteer remained well until the fifth day following inoculation with the unfiltered culture. On that day he complained of a sore throat. The pharynx was reddened, and the cervical lymph gland below the angle of the jaw on the right side was slightly enlarged but not tender. There was no fever and no rash. The next day the throat felt better. No further symptoms developed. The other volunteer of this series, a woman, aged 23, was inoculated with an unfiltered culture of the hemolytic streptococcus on the thirteenth day after inoculation with the filtered culture. She developed a typical scarlitinal eruption of moderate intensity. The rash began to fade on the fourth day. There was some early desquamation on the body. The skin at the tips of the fingers began to show small, opaque white areas at the beginning of the third week. By the end of the third week, desquamation of the hands and feet was marked. It was complete at the end of five weeks. The authors conclude that these experiments do not justify the conclusion that all cases of scarlet fever are caused by the hemolytic streptococcus described.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Deodorized Kerosene-Welty. — Kerosene which has been treated so as to remove the odorous constituents of commercial kerosene. Because of its solvent action on fats, deodorized kerosene-Welty is proposed for use as a pediculocide and as a means of removing dandruff and the detritus of wounds. Welty Company, Chicago.

Cryogenine.—Phenylsemicarbazide.—Cryogenine is an antipyretic and analgesic. It is claimed that cryogenine does not affect digestion, and that it has scarcely any effect on the circulation and respiration. Cryogenine is claimed to be useful as an antipyretic in febrile conditions. As an analgesic, it is said to be of value in rheumatism, headache, sciatica, gout and in painful conditions generally. Cryogenine is marketed in the form of power and 0.5 Gm. tablets.

Neoarsphenamine-Mallinckrodt. — A brand of neoarsphenamine—N. N. R. For a discussion of the actions, uses and dosage of neoarsphenamine, see New Nonofficial Remedies, 1924, p. 49. Neoarsphenamine-Mallinckrodt is marketed in ampules containing, respectively, 0.15, 0.3, 0.45, 0.6, 0.75, 0.9 and 1.5 Gm.

Iletin (Insulin-Lilly) U-40.—Each ampule contains 40 units of Iletin (Insulin-Lilly) (see New and Nonofficial Remedies, 1924, p. 152).—*Jour. A. M. A.*, May 3, 1924.

Ethylene for anesthesia.—Aethylenum pro Narcosi.—It contains not less than 98 per cent. by volume, of ethylene. Trials on human subjects have confirmed the anesthetic and analgesic value of ethylene as demonstrated on animals. Deep surgical anesthesia is stated to be produced easily and analgesia comes on readily and apparently long before surgical anesthesia is established. Given with oxygen, it has been found more powerful than nitrous oxide for animals and man, and in most cases as effective as ether. Trials indicate that ethylene is of value for the production of surgical anesthesia, and that it has advantages over nitrous oxide. Ethylene for anesthesia is supplied in the compressed state in metal cylinders. To avoid accidental explosion, ethylene must not be brought in contact with a naked flame or an electric spark. Ohio Chemical and Mfg. Co., Cleveland.—*Jour. A. M. A.*, May 17, 1924.

Pollen Allergen Solutions-Squibb.—In addition to the products listed in New and Nonofficial Remedies, 1924, p. 251, the following pollen allergen solutions-Squibb are marketed in packages of two tubes diagnostic solution; in packages of six tubes (assorted) diagnostic solution; in 5 Cc. vials for treatment only: Annual Salt Bush Pollen Allergen Solution-Squibb; Arizona Ash Pollen Allergen Solution-Squibb; Arizona Cottonwood Pollen Allergen Solution-Squibb; Arizona Walnut Pollen Allergen Solution-Squibb; Ash Pollen Allergen Solution-Squibb; Black Mulberry Pollen Allergen Solution-Squibb; Black Walnut Pollen Allergen Solution-Squibb; Brome Grass Pollen Allergen Solution-Squibb; California Black Walnut Pollen Allergen Solution-Squibb; Careless Weed Pollen Allergen Solution-Squibb; Cedar Pollen Allergen Solution-Squibb; Cocklebur Pollen Allergen Solution-Squibb; Corn Pollen Allergen Solution-Squibb; Dark Leaved Mugwort Pollen Allergen Solution-Squibb; False Ragweed Pollen Allergen Solution-Squibb; Hickory Pollen Allergen Solution-Squibb; Johnson Grass Pollen Allergen Solution-Squibb; Lamb's Quarters Pollen Allergen Solution-Squibb; Marsh Elder Pollen Allergen Solution-Squibb; Nettle Pollen Allergen Solution-Squibb; Oak Pollen Allergen Solution-Squibb; Pigweed Pollen Allergen Solution-Squibb; Pine Pollen Allergen Solution-Squibb; Poplar Pollen Allergen Solution-Squibb; Rye Pollen Allergen Solution-Squibb; Sandbur Pollen Allergen Solution-Squibb; Shadscale Pollen Allergen Solution-Squipp; Sheep Sorrel Pollen Allergin Solution-Squibb; Slender Ragweed Pollen Allergen Solution-Squibb; Sweet Vernal Grass Pollen Allergen Solution-Squibb.

The following pollen allergen solutions-Squibb, are marketed in packages of two tubes diagnostic solution; in packages of six tubes (assorted); in treatment sets consisting of: Set A: ten vials containing consecutive doses (Nos. 1 to 10, inclusive); Set B: five vials containing consecutive doses (Nos. 1 to 5, inclusive); Set C: five vials containing consecutive doses (Nos. 6 to 10, inclusive); Set D: five vials of dose No. 10: Bermuda Grass Pollen Allergen Solution-Squibb; June Grass Pollen Allergen Solution-Squibb; Mugwort Pollen Allergen Solution-Squibb; Orchard Grass Pollen Allergen Solution-Squibb; Ragweed Pollen Allergen Solution-Squibb; Sagebrush Pollen Allergen Solution-Squibb; Timothy Pollen Allergen Solution-Squibb; Western Ragweed Pollen Allergen Solution-Squibb. E. R. Squibb and Sons, New York.—*Jour. A. M. A.*, May 31, 1924.

PROPAGANDA FOR REFORM.

Radium and Radium Emanation.—Radium is commonly supplied in the form of radium salts enclosed in containers. Also, tubes containing radium emanation are available. Salts of radium disintegrate at a rate so that 1780 years elapse before the compound loses one-half of the initial activity. On the other hand, radium emanation loses about 0.75 per cent. of its activity each hour, and consequently, its activity is practically gone after one month.—*Jour. A. M. A.*, May 3, 1924.

Liposan.—According to the advertising, Liposan is "a Vegetable Lipoidal Solution" which has chaulmoogra oil as its "medicinal element." Liposan is

claimed to be "indicated" in "Abscesses," "Acne," "Anaemia," "Arthritis," "Agitans," "Boils," "Bubo," "Cancer," "Chorea," "Cystitis," "Eczema," "Erysipelas," "Furunculosis," "Herpes," "Hemiplegia," "Ivy Poisoning," "Myalgia," "Neuralgia," "Neuritis," "Peritonitis," "Pyorrhoea," Infantile Paralysis," "Pneumonia," "Rheumatism," "Synovitis," "Syphilis," "Salt Rheum," "Tubercule," "Tonsilitis," "Ulcerations (Indolent)" Varicosities." The proprietors, Hoffman & Hicks, have not requested an examination of Liposan by the Council on Pharmacy and Chemistry, and so far, the A. M. A. Chemical Laboratory has not examined the product. A physician will be justified in his refusal to accept the unproved claims of the manufacturer. He might be justly criticized were he to administer intravenously a product which, so far as he knows, is unstandardized and of wholly questionable value.—*Jour. A. M. A.*, May 3, 1924.

Silicia in Tuberculosis.—Compounds of silica have found a place during recent years among drugs of reputed value in the treatment of tuberculosis. In view of their extreme insolubility, one would scarcely expect them to exert any immediate pharmacodynamic effect. Nevertheless, there is evidence that silica finds its way into the tissues and organs and remains deposited, notably in connective tissues. This has given rise to the hypothesis that the element plays a part in determining the elasticity and tensile strength of fibrous tissues, although the smallness of the quantities of silica ordinarily found should make one extremely skeptical of the validity of any conclusion of this sort. Nevertheless, various silica-containing teas or drugs have been recommended in the hope that they would increase the amount or improve the quality of the connective tissue that forms the defense about tuberculous lesions. A study at the Sprague Institute in Chicago by Maver and Wells brought out nothing but negative results through the administration of silica preparations to tuberculous animals.—*Jour. A. M. A*, May 17, 1924.

Nuga-Tone.—This is a nostrum sold on the mail-order plan by a concern in Chicago called the "National Laboratory"—the latest name under which one Charles E. Cessna carries on mail-order quackery. Nuga-Tone is described as the "Great Nerve and Blood Builder." It has been advertised in that class of weeklies sometimes described as the "cheap and nasty." The advertising does not tell just what is in Nuga-Tone. It does say that it is "rich" in iron and phosphorus, and also contains cascara and "nux." Further, one is told, "there are found other medicines" in Nuga-Tone. The death of a boy, three and a half years old, who had taken Nuga-Tone tablets in his parents absence, is reported. When the death was brought to the attention of the National Laboratory, a formula was furnished which showed that each tablet contained 1/60 grain of mercuric chlorid, 1/60 grain of strychnin sulphate, and 1/40 grain of arsenic trioxid. There is no law in this country which prohibits the indiscriminate sale of such dangerous nostrums.—*Jour. A. M. A.*, May 17, 1924.

Painodynes.—"Painodyne" is marketed in the form of tablets by the Wm. A. Webster Co., Memphis, Tenn. An advertising circular describes Painodynes as "an organic compound containing neurodyne 5 grains, theine citrated ½ grain, combined with triple bromides ½ grain." The circular does not disclose the composition of neurodyne or of the "triple bromides" which are claimed to be present in the mixture. Theine is another name for caffein, and hence "theine citrated" is no doubt intended for the well known citrated caffein. Tests were made in the A. M. A. Chemical Laboratory which showed the product to contain relatively large amounts of acetylsalicylic acid. Painodyne is evidently an irrational "shot gun" mixture marketed with unwarranted claims.—*Jour A. M. A.*, May 17, 1924.

Bacillus Acidophilus Therapy.—Through the use of Bacillus acidophilus cultures a transformation of the intestinal flora of man from a proteolytic to an aciduric type can generally be induced. In cases of constipation, beneficial effects in the direction of more ready defecations are said to arise. Bacillus acidophilus milk has attained the dignity of tentative recognition by the Council on Pharmacy and Chemistry, though this must not be interpreted as a recommendation for the use of the product. Bearing on the question of how Bacillus acidophilus milk acts, experiments have been made which indicate that the action is a strictly bacteriological one, and not physical or chemical. It was found that Bacillus acidophilus milk from which the bacteria have been removed was practically without effect in its influence on constipation. Regular Bacillus acidophilus milk ingested subsequently resulted in an increase in the number of defecations.—*Jour. A. M. A.*, May 24, 1924.

Insulin and Ketosis.—Ketosis is not confined solely to cases of diabetes. It is an accompaniment of carbohydrate starvation, however produced. Acidosis is not infrequently found in preoperative or postoperative conditions, owing to enforced deprivation of food for one reason or another. It is found accompanying so-called toxic vomiting, sometimes particularly in the persistent type seen in pregnancy. Attention has been called to the use of insulin in the treatment of nondiabetic acidosis. The alleviation of this condition through the administration of glucose by rectum or parenterally has been demonstrated. More prompt success has been reported through the combined use of insulin hypodermically, and glucose intravenously. While the treatment gives promise, it is not free from danger. Insulin therapy demands care in the case of a diabetic patient. Doubly great is the need of intelligent precaution with the nondiabetic patient.—*Jour. A. M. A.*, May 24, 1924.

Promonta Not Accepted for N. N. R.—Promonta (manufactured by the Chemische Fabrik Promonta G. m. b. h. Hamburg, Germany, and distributed in the United States by the Acme Pharmaceutical Co., Chicago), is said to be "an organic preparation from nervous matter of the central nervous system combined with polyvalent vitamines, lime, iron, hemoglobin and soluble albuminoids." Promonta is reminiscent of the "Nerve, Brain and Skin foods," "nerve tonics," etc., which had their vogue in the United States before the passage of the Food and Drugs Act; like them, it is recommended for "neurasthenia," "all kinds of fatigue and exhaustion," "anaemia," "bloodlessness," "impaired vitality," etc. The inclusion of "4 per cent" of "polyvalent vitamines" (source not stated) is a modern touch, as is also the reference to experiments on animals (with pictures) which had been made to grow more rapidly by the addition of "Promonta" to their usual diet. Promonta is an irrational mixture of secret composition exploited under preposterous claims.—*Jour. A. M. A.*, May 24, 1924.

Zinc-Borocyl Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that, according to the Al-Sano Chemical Products Co., Zinc-Borocyl is a definite chemical compound. The label of the trade package gives "boridiorthotic oxybenzoic acid zinc" as a synonym for Zinc-Borocyl, but it also declares that the product which is marketed is not the substance to which the name "Boridiorthotic oxybenzoic acid zinc" is applied, but

that "the contents of this bottle represent a concentrated solution" of this product. From the information furnished the Council and the statements on the label and in the advertising, it may be concluded that "Zinc-Borocyl" is a solution containing the so-called zinc borosalicylate in undeclared amounts. Its exploitation is essentially an attempt to introduce an old German nostrum—Mucosan—to American physicians under a new name. Zinc-Borocyl is offered as a germicide, antiseptic and astringent, and is recommended for a host of conditions. The Council declared Zinc-Borocyl inadmissible to New and Nonofficial Remedies because (1) its composition is not correctly declared; (2) it is an unoriginal preparation marketed under a proprietary noninforming name; (3) the recommendations for its use are not upheld by acceptable evidence, and (4) the available information fails to show that the product claimed to be zinc borosalicylate has any advantage over established zinc salts.—*Jour. A. M. A.*, May 24, 1924.

Ferrassin Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that Ferrassin is marketed by Robert Wollheim in the form of tablets and capsules. They are said to be composed of "Vegetable Iron," "Peptonized Iron and Manganese," "Plant Albumin," and Milk Sugar. No information is furnished in regard to the composition of "Vegetable Iron" or of "Peptonized Iron and Manganese." Ferrassin was declared inadmissible to New and Nonofficial Remedies because its composition is secret and it is marketed with unestablished and unwarranted claims.—*Jour. A. M. A*, May 24, 1924.

Tersul-Hiller Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that Tersul Hiller (Robert Wollheim, distributor), is a German preparation of silicon and calcium proposed as "An Adjuvant to the Treatment of Tuberculosis, Rachitis, etc." Physicians are told that Tersul Hiller is: "Composed essentially of coincidently water-soluble silica and water-soluble calcium salts as shown by the following approximate percentage formula: Silica (new process) 4½ gr., Calcium lactate 7½ gr., Calcium hypophosphate ¾ gr., Calcium phosphate 7½ gr., Calcium fluorid, 1½ gr., Calcium carbonate 60 gr., Magnesium phosphate 3 gr., Milk sugar 15 gr." From this formula it would appear that Tersul Hiller is a mixture containing a silica compound of undeclared composition and a mixture of soluble and insoluble calcium compounds —chiefly calcium carbonate. The Council found Tersul Hiller inadmissible to New and Nonofficial Remedies because (1) there is no acceptable evidence for the therapeutic use of silica preparations; (2) the identity of the silica compound is not declared; (3) the use of the mixture is irrational, and (4) the claims for its therapeutic effects are unwarranted.—*Jour. A. M. A.*, May 24, 1924.

San-I-Sal.—Newspaper advertisements have appeared during the past month or two advising the obese public of "A Guaranteed Way to Take Off Two to Five Pounds in One Bath." The product advertised is "San-I-Sal, the Pine Hot Springs Bath." It is sold by the San-I-Sal Laboratories, Washington, D. C. The advertising claims are typical of "patent medicine" obesity cures. According to the specifications of a patent granted by the U. S. Patent Office, the "invention" is said to relate to "a composition of matter for producing a medicated bath of particular value in the treatment of obesity. The "composition" is stated to be: Epsom salt 90 per cent., baking soda 2 per cent., table salt 5 per cent., Canada balsam 2 per cent., oil of pine needles 1 per cent. The specifications also declare that the substance used in the bathing water has been found to afford "great relief in cases of inflammatory rheumatism and ailments of a similar character." That a mixture of Epsom salt, baking soda and table salt with a small quantity of Canada balsam and oil of pine needles should be granted a patent by the U. S. Patent Office as a new and useful invention, makes one wonder just how much intelligence on medical subjects there is displayed by the Patent Office.—*Jour. A. M. A.*, May 31, 1924.

NEWS

Contract for $50,000 County Hospital at Seymour, Baylor county, has been let. Work is to begin on this hospital at once.

Officers Elected by the Texas Pharmaceutical Association at their annual convention at Austin, Texas, were as follows: President, W. H. Whisenant, San Antonio; first vice-president, A. W. Griffith, Austin; second vice-president, Wm. Willman, Brownsville; secretary-treasurer, W. D. Adams, Forney (re-elected); members executive committee, Coakley Evans, Austin (re-elected) and Knox Pittard, Anson; home secretary, J. W. Graham, Austin; historian, Dr. Chester A. Duncan, dean of Baylor University School of Pharmacy.

Women Doctors Decreasing in Number.—There are only six women doctors to every 100 male physicians in the United States, according to Dr. Kate C. Meade, Middletown, Conn., who spoke recently before the convention of the Medical Women's National Association, at Chicago. Ten years ago, she said, women made up approximately 10 per cent of the medical profession. The decrease she ascribed to increased costs of medical training, and to the spread of social service and laboratory work which attracts, she said, the type of women who might otherwise have followed a medical career.

State Graduate Nurses' Association met at Dallas, June 11-13, at which time a resolution was adopted recommending the complete reorganization of the State Health Department of Texas. The following officers were elected for the ensuing year: President, Miss Mary Grigsby, Waco; vice-presidents, Misses Ellen Louise Brient of San Antonio, Miss Arline McDonald of Temple and Grace Gray of Galveston; secretary-treasurer, Miss A. Louise Dietrich, El Paso; trustees, Mrs. Grace Englad of Sanatorium and Miss Ella Read of Houston. Quite a large body of the delegates to the State Association left for the National Graduate Nurses' Association meeting in Detroit, Michigan.

No Action on the Sale of Alcoholic Preparations was taken at the recent annual convention of the Texas Pharmaceutical Association at Austin. There was a resolution recommending to Congress the creation of Federal dispensaries for handling whiskey, thereby relieving the druggists of the responsibility for filling liquor prescriptions, but this resolution was referred back to the committee that presented it, and died in committee. The convention, however, went on record as being opposed to the sale of alcohol and manufactured preparations which are in reality nothing else but liquor substitutes, and a resolution was adopted calling on the Prohibition Enforcement Department at Washington to discontinue the issuance of permits to purchase alcohol for the manufacture of such preparations.

Bobbing Hair Will Not Make It Grow.—Dr. Herman Goodman says, in the April *Hygeia:* "Cutting the hair (table talk to the contrary) does not improve its growing qualities. Under general conditions, it takes the hair about six weeks to grow one inch. However, not all of the hairs of the scalp, even if uncut, would grow to the same length. On the crown and back of the head, the hair may grow 40

to 50 inches and not be unusually long, while at the sides, 18 inches is generally the limit. In men, of course, such long hair is very uncommon, and with the fashion, it becomes increasingly unusual among women."

Another statement that Dr. Goodman makes, which may be surprising to the uninitiated is, that the hair grows most quickly between the ages of 35 and 60. If the hair is being shed at a more rapid rate than it is being replaced by new hair, one should consult a physician who makes a specialty of skin treatment, and not the barber, the drug clerk or the hair dresser, who may have something to sell.

Rio Grande Public Health Society was organized in Harlingen, May 30. All county and city health officers, and nurses engaged in public health work in Starr, Hidalgo, Cameron and Willacy counties, are eligible for membership. The officers elected at this meeting were as follows: President, Dr. B. L. Cole, Brownsville; vice-president, Dr. G. A. McBride, Harlingen; secretary-treasurer, Dr. J. R. Mahone, Pharr. The society will meet the second Thursday of every second month, beginning with January.

Resolutions were adopted calling upon members to correspond with their State legislators, urging that sufficient funds be appropriated by the next Legislature to properly finance the public health work of the State. The mosquito-control campaign of the United States Public Health Service and the Texas State Board of Health, was endorsed. The secretary of the society was instructed to request the State Board of Health to station a district sanitary engineer in the Rio Grande Valley, for service in the counties under the jurisdiction of the society.

SOCIETY NEWS

Bexar County Medical Society met May 8, with 35 members and two visitors present.

Dr. Theo Y. Hull, E. W. McCamish and Thomas Dorbandt, the three delegates to the State Medical Association, reported on the recent Annual Session.

Dr. W. M. Bourn, D. D. S., read a paper by invitation, entitled, "The Relation of the Practice of Dentistry to the Public Health." This paper had been read before the State Medical Association, and will appear in the JOURNAL.

Dr. T. J. Walthall opened the discussion, saying in part that it is not possible to pay too much attention to focal infection. Both the public and the profession should be educated regarding the dangers of oral sepsis. There should be instructors in dental hygiene in the public schools.

Dr. E. V. DePew said that there was no doubt that a relationship existed between the mouth and the gastro-intestinal tract, and that good teeth and thorough mastication will largely prevent many stomach disorders. Ulcers of the stomach and duodenum, and infections of the gall bladder and appendix often result from infected teeth. Soft foods probably have something to do with receding gums, with pyorrhea as a result.

Dr. Clara Cook said that mothers should be impressed with the importance of looking after their children's teeth. People in general regard the preservation of the first set of teeth as of little importance.

Dr. W. S. Hanson said that he considered the most important point of the paper to be the plea for the prevention of oral pathology. Selection of proper food in childhood is very important, as is also the diet during pregnancy. A surprising amount of dental pathology may exist with no apparent systemic effect.

Dr. W. A. King agreed with the essayist that the teeth of children should be examined at regular intervals. He stated that the American Public Health Association was formed for the purpose of preserving the public health. He stated that this organization was contemplating the standardization of the public health of cities of over 1,000 population, and their classification as A, B, C. To be in Class A, a city must have charge of the public health activities of the schools, and the Health Department must make a systematic examination of the teeth of all school children.

Dr. Thomas Dorbandt stated that twice since he had been a delegate to the State Medical Association these public health matters had come up and that the time had never seemed ripe to launch such a movement. Some leaders have thought that the dentist should be a physician who specializes in dentistry. The dental profession has some wide-awake, active men who have seen the need for advancement in dental education. He hoped that the time was not far distant when there would be better co-operation between the two professions.

Dr. C. A. R. Campbell had noticed that the people are slow to go to dentists for treatment of decayed teeth that have not caused them any pain. The three essentials for bacterial growth, namely, warmth, moisture and organic matter, are always present in decayed teeth, and patients should be warned of the danger to their future health in neglecting their teeth.

Dr. W. S. Hanson, section chairman for the May 15 scientific program, announced that the next meeting would be held at the Robert B. Green Memorial Hospital, and that the staff of the hospital would read papers and present clinical cases.

Brown County Medical Society met June 10, with a good attendance. Dr. Lloyd C. Tittle read a paper on the "Treatment and Prognosis of Cerebrospinal Syphilis."

Following the scientific program, the question of the educational campaign was generally discussed, and the secretary was instructed to send questionnaires to State candidates in this district, in order to find out their attitude toward the Medical Practice Act and their views in general of public health questions. Announcement was made that the Rotary, Lions, Kiwanis and Business Women's Clubs, have consented to a joint luncheon on June 24, in order to hear Dr. J. J. Terrill of Dallas, one of the speakers in the Educational Campaign.

Dallas County Medical Society met April 10, with forty-five members present.

Dr. B. H. Griffin reported the case of a child six weeks old, with pityriasis rosea. The earliest age at which this condition usually appears is 2½ years.

Dr. T. M. Jarmon reported the case of a man 22 years of age, with symptoms of cardiac distress and cyanosis. There was a tumefaction over the area of the right clavicle. The patient was examined by several members.

Dr. John Haley of Irving, exhibited a pair of Siamese twins. They were united near the umbilicus, and were also harrlipped.

Dr. R. E. VanDuzen read a paper on "Polycystic Kidney," which was discussed by Dr. A. Clay Gilbert.

Dr. C. W. Flynn read a paper on "Intestinal Obstruction," which was discussed by Drs. A. R. Thomasson, Penn Riddle, T. M. Jarmon and M. S. Seely.

Dr. A. R. Thomasson read a paper on "Simple Technique of Skin Grafting," which was discussed by Dr. M. S. Seely.

Dr. J. Spencer Davis read a paper entitled "Causalgia."

Drs. B. Rubenstein, Harold Freed and Geo. T. Veal, were elected to membership.

Dr. R. H. Millwee, reporting for the Clinic Committee, outlined a plan for a daily instead of a monthly clinic as heretofore. By motion of the society, the report was accepted and a daily clinic inaugurated.

Dallas County Medical Society met April 24, with 55 members and 2 visitors present.

Dr. Raworth Williams presented the case of a negro with cancer of the penis.

Dr. R. B. Giles reported the case of a boy with an aplastic anemia of six weeks' duration. The illness had come on suddenly and was characterized by marked weakness and anemia. The etiology of the disease is unknown and its usual course is rapid, death occurring in two or three months.

Dr. David W. Carter read a paper on "The Present Day Management of Diabetes Mellitus," which was discussed by Dr. Giles.

Dr. Kenneth M. Lynch read a paper on "The Difficulties of Tumor Diagnosis," which was discussed by Dr. J. H. Dorman.

Dr. J. F. Perkins read a paper on "Problems Confronting the Physician in the Diagnosis of Malnutrition," which was discussed by Dr. H. I. Gosline.

Dr. S. E. Thompson of Kerrville, read a paper on "Incipient Tuberculosis."

Drs. W. E. Haley, C. G. Catto and J. S. Terry, were elected to membership and Dr. L. A. Nelson was received on transfer from the Grayson County Medical Society.

The society then went into executive session, at which time charges of unethical conduct against one of its members were read, together with a written apology from the accused. The letter of apology was accepted and spread upon the minutes of the meeting, by a vote of the society.

Dallas County Medical Society met May 22, with 58 members present.

Messrs. Frank Smith and T. M. Cullum, of the Dallas Chamber of Commerce, addressed the society in the interest of that organization, urging the members of the society to join.

Dr. W. Mood Knowles reported the case of a woman, 56 years of age, who suffered from a bilateral glaucoma, with a vision of 20/200 in each eye. Medical treatment had increased this vision to 20/40, but after three or four months the vision became suddenly worse and Dr. Bettison did an iridectomy on the left eye, which he had to subsequently remove on account of postoperative infection. The vision in the unoperated eye suddenly decreased to almost *nil*. Dr. Knowles stated that this report was made in order to correct a false statement that had gone out to the effect that Dr. Bettison had removed the wrong eye through mistake.

Dr. C. C. Nash read a paper on "Injuries of Abdominal Viscera, Without External Signs," which was discussed by Drs. Smoot, Carlisle and Marshall.

Dr. Penn Riddle read a paper on "The Value of Sodium Chloride and Enterostomy in the Treatment of Intestinal Obstruction." This paper was discussed by Drs. Curtice Rosser, Jarmon, Smoot, Giles, Marshall and Nash.

Dr. Curtice Rosser read a paper entitled, "Proctology in the Negro: Incidence and Peculiarities," which was discussed by Drs. Edward White, Seely and Carnathan.

A committee, consisting of Drs. S. M. Freedman, T. M. Jarmon and R. H. Daniel, was appointed to confer with the free clinics of the city from time to time, to ascertain what steps were being taken by those in charge to see that only persons entitled to charity were being served.

Harris County Medical Society met May 10, with 60 members present.

Dr. F. R. Lummis presented the case of a woman, aged 28, whom he had previously treated for pernicious vomiting in pregnancy. Therapeutic measures, such as glucose and soda, per rectum, lutin extract intramuscularly, gastric lavage and sedatives, were of no avail. The patient was jaundiced, had lost 40 pounds and the pulse rate was 120. After consultation, a therapeutic abortion was done. March 10, 1924, the patient again presented herself for treatment, stating that she had not menstruated since January 21. Soon after this, she began to lose weight, and later nausea and vomiting developed. On April 18 she was moved to the hospital, at which time she had lost 25 pounds. She showed a slight icterus, and her urine was diminished and contained bile, acetone and diacetic acid. About 100 c.c. of a ten per cent solution of dextrose and 10 units of U-iletine were given subcutaneously, and the following day 700 c.c. of this solution, with 10 units of iletin, was administered.

A change in the patient was noticeable following this treatment. She felt and looked better and began to take water and retain it. In the course of a week her diet was built up until it would maintain her. She began to menstruate soon after the second injection of dextrose and iletine. The diacetic acid disappeared entirely from the urine after ten days, and the patient is at present in good health.

Dr. J. H. Turner presented three cases with symptoms very closely simulating those of malaria. In the first case the chief complaint was backache and daily chills and fever. The patient had lost 30 pounds in weight. A diagnosis of prostatitis and urethral stricture was made, and upon prostatic massage and urethral dilatations, the fever and chills subsided, and the patient regained the 30 pounds that he had lost.

In the second case, the chills and fever had begun three months before examination. Repeated blood examinations had revealed no plasmodia. The patient had had gonorrhea, with a severe cystitis, 18 years previously. A number 16 sound was passed with difficulty, and produced blood. The patient's urine was rendered alkaline and dilatations were instituted. The fever subsided after the third dilatation.

In the third case, the patient stated that he had been having chills and fever at intervals since 1918. The patient had had gonorrhea 12 years previously. A filiform sound was passed with great difficulty and pain. Dilitations were instituted and the chills and fever subsided promptly. The speaker presented the following conclusions: (1) Stricture of the urethra may produce symptoms simulating malaria; (2) careful urinalysis should be made on all patients; (3) pyelitis may give the same symptoms; (4) the three cases reported made uneventful recoveries after urethral dilatations, and (5) this syndrome is more common than is generally recognized by the profession.

The chairman then introduced Dr. Harvey Matthews of New York, who gave a very instructive address on "The Effect of Radium and *X*-Ray on Reproductive Tissues."

Harris County Medical Society met May 17, with 58 members present.

Dr. L. W. Kuebler reported two urological cases presenting some unusual features. In the first case, a man, 69 years of age, had had retention of urine four years previously and some retention since that time. He had lost considerable weight, and four months previous to reporting for examination his bladder had begun to trouble him. Rectal examination showed bilateral enlargement of the prostate, which was very sensitive to the touch. Urinalysis showed pus and red blood cells. Suprapubic drainage was instituted August 31, and eight weeks later the prostate was enucleated, under sacral and local

anesthesia. The pathological report showed a possible malignancy. During the time of suprapubic drainage, there had been an elevation of temperature, which subsided after prostatectomy. The patient complained of dysphagia at times, and later had a relapse and began to lose weight and strength rapidly. A tumor suddenly appeared in the epigastric region, which increased to the size of a grapefruit. The *x*-ray diagnosis was gastric carcinoma. The patient died ten days later.

In the second case, a woman, aged 22, had had some bladder disturbance, pain in the right side and a high temperature since February, 1924. The patient was anemic, underweight and showed a clammy skin. She had a hacking cough and moist rales were found on examination. Sputum examination showed tubercle bacilli. Attempts to catheterize the right ureter were unsuccessful. Fourteen c.c. of a one per cent solution of mercurochrome were given intravenously, and the temperature dropped slightly the following day. *X*-ray examination showed a probable pyo- or hydronephrosis. A distinct mass had arisen over night in the right side. It was decided to operate, but the mass disappeared and the operation was postponed. Ten cc. of a one per cent solution of mercurochrome were again administered, and the patient gradually improved. However, because of the *x*-ray diagnosis and the inability to catheterize the right ureter, an operation was decided upon, which revealed a mere shell of kidney substance and a nephrectomy was done. Section of the kidney failed to show any tuberculous involvement. The obstruction to the ureter was evidently caused by the ptosed kidney carrying the ureter down with it in its descent. The patient has made satisfactory progress since the operation.

Dr. Jas. H. Agnew read a paper on "Examination of the Gall-bladder." He stated that examinations of viscera in the region of the gall-bladder had never been uniformly satisfactory, due to the great number of pathological conditions that occur in that region. The methods of gall-bladder examination are, first, palpation; second, examination of the bile, and third, visualization of the gall-bladder. Palpation still remains the best single method, as the gall-bladder can be felt in most cases when it is diseased. The location, degree and extent of tenderness and muscular spasm, together with the history of the case, are the most important points in the diagnosis. Microscopic, chemical and bacteriological examinations of the bile have not been of any great value.

Visualization of the gall-bladder by *x*-ray may be accomplished, first, by the shadow of the gall-bladder and its contents; second, by the shadow thrown into relief by pneumo-peritoneum, and third, by the shadow of the gall-bladder containing opaque substances. The gall-bladder rarely produces a shadow unless a stone is present. The pneumo-peritoneum method has not been given the attention it deserves. Intravenous injections of calcium phenol-tetrabromphthalein will throw the gall-bladder into relief because of the concentration in that organ of this substance, which is largely excreted by the liver. This latter method presents most interesting possibilities in the difficult field of diagnosis.

Dr. L. F. Hodde read a paper on "Spasmophilia." Spasmophilia is a condition of irritability of the nervous system peculiar to infancy, and which is indicated by a mechanical reaction of the peripheral nerves and by the tendency to tonic and clonic convulsions. It is frequently hereditary and is most commonly seen in the Spring. Poor hygiene, improper eating and digestive disturbances, are regarded as etiological factors. There is a disturbance of the calcium balance in the body. There are three types of convulsions in this affection, laryngospasm, eclamptic convulsions and tonic convulsions. In all three types the symptoms may vary from very milk to very severe attacks. The disease is to be differentiated from epilepsy, paralytic conditions, and such acute diseases as malaria, pneumonia, meningitis, etc. The diagnosis is made by the presence of positive Erb's, Chostek's and Torousseau's signs; corpopedal spasm; laryngospasm, and a lowered calcium content in the blood. The treatment should be prophylactic, breast-milk feedings, orange-juice, cod-liver oil, calcium, sunlight, fresh air, and other such measures. In acute attacks, chloroform may be carefully administered.

Harris County Medical Society met May 24, with 83 members present.

Dr. E. L. Goar read a paper on "An Operative Case of Alternating Squint in An Adult."

Dr. C. M. Sampson of New York City, read a paper on "Physiotherapy in Relation to General Practice."

Tarrant County Medical Society met April 15, with 30 members present.

Dr. J. F. McVeigh read a paper on "Carcinoma of the Suprarenal Gland: Report of a Case." The case reported was a beautiful example of the rare condition of malignancy of the suprarenals. Antemortem diagnosis is practically impossible. Even if such a diagnosis could be made, it could probably not be made early enough to be of any service to the patient. When the patient reported to the hospital his chief complaint was pain in the chest. He walked with unsteady gait and manifested great weakness. At times he was irrational and answered questions slowly. Physical examination was negative, except for emaciation, and small tumor masses of the right zygoma and first left rib. The patient became gradually worse and showed signs of central nervous irritation, involuntary bowel and bladder movement, and delirium. On the fifth day, forced feeding was necessary, and the following night the patient became comatose and died. The laboratory findings were all negative. Autopsy showed carcinoma of the right suprarenal, with metastases to the liver, first left rib, righ zygoma and dura mater of the brain. The paper was discussed by Dr. E. P. Hall.

Dr. S. Jagoda read a paper entitled "Present Status of Deep Therapy; Radium and *X*-Ray." He stated that by deep *x*-ray therapy is meant a nine to fifteen-inch spark gap or 135,000 to 210,000 volts applied to the deeper structures of the body. Deep therapy is recommended in malignancy, Hodgkins disease, thymus hypertrophy, leukemias, fibromata of the uterus, tuberculous glands, myelomas and keloids. The general trend in dealing with malignancies is to rely more and more on radiotherapy as an aid to, or sometimes a substitute for, surgery. Dr. Phfaler of Philadelphia, says that with the use of deep therapy before and after operation, the percentage of patients living five to eight years subsequent to operation will be doubled. The Mayo Clinic reports on carcinoma of the prostate show that in cases that were operated upon, 19 per cent lived five to eight years, and in cases that were radiated and not operated upon, 18 per cent lived five to eight years. The paper was discussed by Drs. F. S. Schoonover and Wilmer L. Allison.

Dr. R. H. Gough read a paper on "A Brief Clinical Study of Accessory Sinusitis," which was discussed by Dr. J. J. Richardson and S. Jagoda.

Dr. F. S. Schoonover read a paper entitled "Adequate Treatment of Heredo-Lues," which was discussed by Drs. Wilmer L. Allison, R. H. Needham and Edwin Davis.

Resolutions on the death of Dr. C. P. Brewer, were adopted by the society.

Dr. S. A. Lundy was elected alternate delegate to the State Association, to fill the place made vacant by Dr. Brewer's death.

Tarrant County Medical Society met May 20, with 20 members present.

Dr. E. C. Schoolfield reported the case of a woman who died in the City-County Hospital, from a miliary tuberculosis, in which meningitis was the prominent symptom. An autopsy revealed miliary tubercles throughout the peritoneal cavity, and on removing the brain, tubercles were found on the pia- arachnoid.

Dr. D. R. Venable reported the case of a Mexican man who entered the City-County Hospital with physical signs of a localized pleurisy, and pneumonia at the base of the left lung. A day or two after admission to the hospital, the patient during a violent attack of coughing, coughed up a specimen of ascaris lumbricoides, 11 inches long. This specimen was a female and was of an intense pink color, due evidently to its diet of blood in the lungs. Biologists report that during the life cycle of the ascaris lumbricoides, larval forms migrate to the lungs and may be recovered in the sputum. From the lung the embryos migrate up the air passage and gain entrance to the esophagus. It is possible that the large specimen which this Mexican patient coughed up may have been vomited up as a result of gagging during the act of coughing, but cases have been previously reported in which the parasite had failed to migrate when small, and had been coughed up from the trachea, in some cases producing death by blocking the larynx. The patient was treated with santonin and calomel, preceded and followed by magnesium sulphate, and made a rapid recovery, his lung signs and symptoms clearing up completely.

Dr. Wilmer Allison reported the case of a woman suffering from a definite neurosis. She was so violent that in order to bring her to Fort Worth for treatment she had been given several doses of morphine and hyoscine. The patient fell into a deep sleep and appeared to be in a dying condition. Two weeks have elapsed since that time and the patient is still profoundly unconscious, with temperatures ranging from 101° to 104° F.

Dr. M. E. Gilmore, chairman of the City Charter Sub-committee, opened a discussion of the status of the Health Department under a city management form of government. The question was discussed by Drs. Withers, Bonelli, Allison, Edwin Davis, Chase and Thompson.

A motion was made and carried that Dr. Rankin, the Field Director of the U. S. Public Health Service, be invited to come to Fort Worth during the last week in May, for the purpose of conferring with the City Commission, regarding the establishment of a Health Department under the new charter.

Dr. Earl Harris was elected to membership.

Tarrant County Medical Society met June 3, with 80 members present.

Dr. K. V. Kibbie presented an interesting report on the public-school situation from a health viewpoint. In answer to inquiries from the floor, Dr. Kibbie stated that it was not the school-physician's province to prescribe for schoolchildren, but that it was difficult, in some minor instances and under some circumstances, for him not to give advice which might be considered a prescription.

The Society went into executive session in order to hear a report from the Board of Censors, on charges that had been brought against one of the members of the Society. This member was found guilty and censured by the Society, for alleged unethical advertising.

CHANGES OF ADDRESS.

Dr. Minnie O. Parrish, from Austin to Gainesville.
Dr. L. L. Jackson, from Linden to Talco.
Dr. Agnes Jackson, from Linden to Talco.
Dr. C. M. Blair, from Bartlett to Waxahachie.
Dr. H. J. Germany, from Speegleville to Waco.
Dr. R. H. Salmon, from Irene to Savoy.
Dr. J. O. Rogers, from Kerens to Italy.
Dr. T. G. Vanzant, from Cameron to Houston.
Dr. J. H. Carraway, from Sadler to Sherman.
Dr. K. L. LaRue, from Nacogdoches to Mt. Pleastnt.
Dr. Herbert L. Gammons, from El Paso to Franklin, La.
Dr. T. D. Holder, from May to Bangs.
Dr. A. M. Letzerich, from Corpus Christi to Yorktown.
Dr. W. J. Malone, from Corsicana to Luling.
Dr. Feelix Peebles, from Hallsville to Jefferson.
Dr. M. C. Marrs, from Birthright to Sulphur Springs.
Dr. J. J. Lockhart, from Wells to Rusk.
Dr. J. B. Birt, from Whitewright to Harper.
Dr. L. B. Woods, from Jacksboro to Wilson, Okla.
Dr. F. K. Turney, from San Angelo to Alpine.
Dr. M. I. Leff, from El Paso to San Luis Potosi, Mexico.
Dr. C. E. Alexander, from Waco to Lufkin.

DEATHS

Dr. A. B. Crain of Belton, Texas, died at his home, June 3, of an acute exaccerbation of splenomyelogenous leukemia, from which he had suffered for more than two years.

Dr. Crain was born at McGregor, Texas, February 5, 1884, and received his early education from the schools of that community, graduating from the high school of that city in 1902. He received the degrees of Ph. G. and M. D. from the Tulane University in 1908, immediately following which he located at Belton, Texas, where he had since practiced medicine and surgery, and in which work he was associated with Dr. M. P. McElhannon.

Dr. Crain was married to Miss Fannette Hale of Meridian, Texas, October 20, 1909, who, with one small daughter, survives him. He is also survived by his father, J. N. Crain of McGregor, three sisters and one brother.

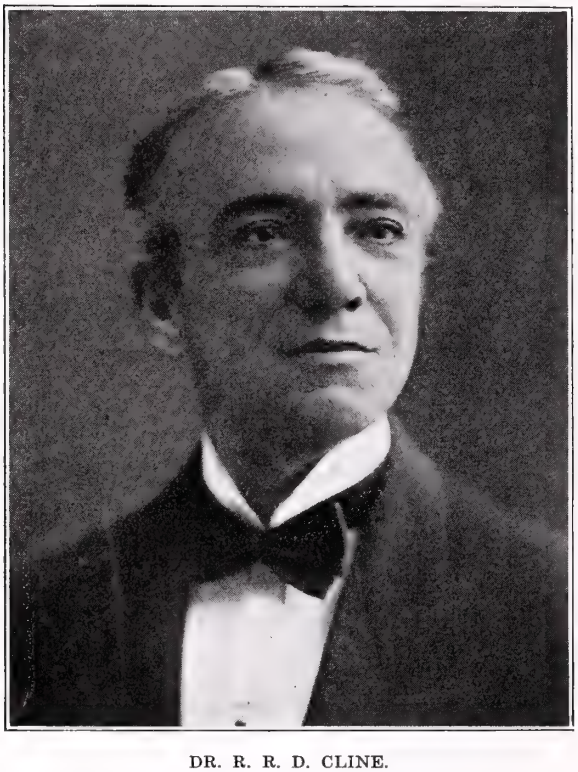
Dr. Crain was one of the organizers of the Belton Sanitarium, in 1916, and during the late war was chairman of the local draft board. He served as Captain in the Medical Corps of the Army, from September 4 to December, 1918, at which time he was discharged. He was a Mason of high degree, an Elk, Rotarian, and a consistent member of the Christian Church. He was at one time president of the Bell County Medical Society, of which organization he had been an active member for many years. He was also a Fellow of the American College of Surgeons and of the American Medical Association.

Dr. R. R. D. Cline of Galveston, died at his home, May 20, 1924, after a brief illness.

Dr. Cline was born in Tyler County, Texas, September 14, 1868. He received his preliminary education in the Houston public schools. After completing his high school work there, he took an academic course at Gettysburg, Pennsylvania, where he received the degree of Master of Arts. He later studied pharmacy at Lille, France, and science and medicine at Mt. Pellier, receiving the degree of Ph. D. from the University at Lille. While in France, Dr. Cline was Professor of English and Science at Lille and Mt. Pellier. On returning to America, he took a special course in pharmacy at the College of Phar-

macy in New York City, from which he also received the degree of Ph. G. He took this latter course because he wished a degree in pharmacy from an American university.

In 1895, Dr. Cline was elected Professor of Pharmacy in the School of Pharmacy of the University of Texas, and in 1896 was elected lecturer on pharmacy and prescription work to the medical students of that University. In 1912 he was elected lecturer on materia medica and therapeutics to the nurses in the College of Nursing of the University of Texas. While teaching in the Medical Department, Dr. Cline took up the study of medicine, receiving his M. D. degree in June, 1909. Dr. Cline was an unusually brilliant student, making an average dur-



DR. R. R. D. CLINE.

ing his senior year in medicine, of 92.25, and a general average for the four years, of 92.27. In the thirty years that Dr. Cline was head of the School of Pharmacy of the University of Texas, he was a beloved and inspiring teacher, and it was said of him that "No pupil ever sat under him without absorbing some of his enthusiasm and the love for his work."

Dr. Cline was widely known as a pharmacist of unusual ability. He was a prominent figure in state and national pharmaceutical circles. He was an enthusiast, devoted to his work and untiring in his efforts to place pharmacy and especially the profession of pharmacy in Texas, in its proper place. He worked untiringly to secure the passage of proper laws to insure to the State an adequate pharmacy board and to secure for the people competent pharmacists. If he had one ambition above another, it was this.

His contributions to the literature of pharmacy are many and voluminous. Among his many essays may be mentioned "Ergot, Its Assay and Preservation," "Digitalis and Strophanthus," and "The Alkaloidal Content of Ipecac and Its Preparations." In addition to these scientific articles, Dr. Cline wrote a book entitled "Pharmaceutical Technology,' which was used as a text in the School of Pharmacy at the University of Texas. The Dean of the Medical Branch of the University of Texas paid this tribute to Dr. Cline's memory, in his address to this year's graduating class in Pharmacy:

"In the death of Dr. Cline, the State of Texas has lost its pioneer Professor of Pharmacy, the man who made the School of Pharmacy what it is today, who had the love of all his old students, who had the love and respect of the pharmacists of the State. A man of unbounded enthusiasms, of the highest professional ideals, who regarded the service of the people as the first duty of every pharmacist, and gave himself unreservedly to every student in his classes. I can hold up to the graduates in pharmacy no better example of professional standards. I believe that in any doubtful case, each man can ask himself what would Dr. Cline have done, and have a safe guide in his decision. In Dr. Cline's name I wish you all the good he would have wished you."

BOOK NOTES

Environment and Resistance in Tuberculosis. By Allen K. Krause, A. M., M. D., Associate Professor of Medicine, Johns Hopkins University of Medicine; Physician in Charge, Phipps Tuberculosis Dispensary, Johns Hopkins Hospital; Lecturer, Trudeau School of Tuberculosis; Editor, American Review of Tuberculosis. Cloth, 12mo., Pages 137. Williams & Wilkins, Baltimore. $1.50.

This is a clear, original, satisfactory presentation of the nature of environment and resistance and their relation to the pathology, diagnosis, symptoms and treatment of tuberculosis. The text is in two sections, "Environment" and "Resistance."

The book will be of keenest interest to the professional group—physicians, medical students, nurses and public health and social workers, interested in tuberculosis.

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"We are in the midst of a general reform in medicine. In our day for the first time, the full domain of this so comprehensive field of learning has been laid open to scientific research. Doctrines that belong to the oldest traditions of mankind are put to the test, not only of experience but of investigation. For experience, proofs demanded; for research, accurate methods. * * *

"Especially does this embarrass the practitioner of medicine. He to whom the exercise of his profession allows hardly the necessary time for reading who but too often lacks sufficient literary resources as well as comprehension of the newer experiences finds himself in a dizzy chaos in which the ruins of the old are inextricably entangled with the building stones of the new."

When Virchow wrote this nearly sixty years ago, even he perhaps, little comprehended what a new era medicine was entering upon, and what a vast expansion and enlargement was to take place in such a short space of time. If his statement was true at that time, how much truer it is today, when it is recognized by all thoughtful students of medicine that it is impossible for one individual to know thoroughly all that is to be learned in the world of scientific medicine.

This has brought about an age of specialism. It has also brought about such works as the "Nelson Loose-Leaf Living Medicine." This loose-leaf system of medicine meets the need, in our opinion, better than any of its predecessors. It is published by a great book publishing organization with the machinery for gathering and compiling the information desired, and all the facilities for doing the mechanical work necessary. To properly abstract and select the material for such a work requires not only expert editorial skill, but the knowledge and experience of those who by their leadership in medical circles are acknowledged to be capable of selecting the wheat from the chaff, and presenting this information to the reader in a palatable form.

Looking over the long list of names of those whose efforts contributed to this work, no one can doubt but that in this great undertaking the best medical minds of the world have been "drafted." So many authors of international reputation (over 250) are represented among the contributors to this system of medicine, that there is not space in this brief review for their enumeraiton.

The binding is of attractive quarter black leatherette, with gilt lettering. The leaves are held together tightly by a patented device, and yet new leaves are easily added. It is the best loose-leaf binding that we have seen.

The text is in eight volumes. Volume I treats of Infectious Diseases; Vol. II, Infectious Diseases, Parasitic Diseases, Chemical Agents and Physical Agents; Volume III, Metabolism, Endocrine Glands, Lymph Glands and the Respiratory System; Volume IV, Diseases of the Blood, Circulatory System and Kidney; Volume V, Diseases of the Digestive System, Muscles, Bones and Joints; Volume VI, Diseases of the Nervous System, and Volume VII, Prevention of Disease, and Public Health. There is a separate Index, which is invaluable. In addition, there is an unnumbered volume entitled "Medical Service," which holds the leaves sent from time to time by the publishers, which leaves contain a survey of current medical literature. As changes become necessary, it is the plan of the publishers to send these changes to the subscriber biannually, to add to his seven volumes or to replace the pages in these volumes which have become obsolete, thus keeping the work practically up to date. For this service a nominal yearly sum is charged.

Many permanently bound books are out of date before they can be turned off the press and distributed. This loose-leaf system is almost ideal, and will save the busy practitioner much valuable time, as well as money, and enable him to keep abreast of the times in the medical world which he could hardly do in any other way. The text is ably written, clear, entertaining and to the point, and more than that, it is authoritative. We do not hesitate to advise our readers to purchase this service.

The Antidiabetic Functions of the Pancreas and the Successful Isolation of the Antidiabetic Hormone—Insulin. By J. J. R. Macleod, M. D., Professor of Physiology, University of Toronto, and F. G. Banting, M. D., Research Professor, University of Toronto, (who were awarded the $40,000 Alfred Noble prize for the most noteworthy contribution to medical science in the year 1922.) 12 mo. Cloth. pp. 70. C. V. Mosby Company, St. Louis, Mo.

The authors need no introduction to the medical profession. The booklet comprises three lectures which were delivered under the auspices of the Wayne County Medical Society, Beaumont Foundation. The first two lectures are by Dr. Macleod and the third by Dr. Banting. The landmarks in the study and experimental work of the pancreas and its functions, are given in succinct form, and due credit is generously accorded each contributor to our knowledge of the organ. Following this historical sketch is an outline of the method by which the pancreatic hormone, insulin, was finally isolated. The technique of its preparation and the method of its administration are graphically described.

This book is a most valuable and authoritative contribution to scientific medicine, and the work that it records has been described as a "triumph of the experimental methods."

Gynecology and Pelvic Surgery. By Roland E. Skeel, A. M., M. D., M. S., formerly Associate Clinical Professor of Gynecology, Western Reserve University. Member Senior Surgical Staff, California Lutheran Hospital, Los Angeles. Second Edition, revised and compared, with 20 pages of Illustrations. 12 mo., pp. 674. Cloth, $5.50. P. Blakistons Son & Co., 1012 Walnut St., Philadelphia.

This book is written for both the medical student and the general practitioner, and is up-to-date in every particular. Its author is well known, both as a gynecologist and as a teacher. His experience has been a broad one and he speaks authoritatively on subjects that have been much debated. The twenty chapters are ably written, concise, and will amply repay a careful perusal. The general practitioner must practice gynecology, and hence for him this volume will be both instructive and entertaining. The gynecologist will not discover in this book an exhaustive treatise on the subject, but he will find the subject matter well chosen and spiced with originality.

The Clinical Method In the Study of Disease. By R. M. Wilson, M. B., Ch. B., Late Assistant of Sir James Mackenzie under the Medical Research Committee, Cardiologist to the War Office Trench Fever Committee, and Consulting Physician to the Ministry of Pensions. 12 mo., pp. 72, Henry Frowde, Hodder and Stoughton, the Lancet Building, London.

This interesting booklet is a sort of memorial to the late Dr. Horace Dobell. The frequent quotations in the body of the book, give a better insight into the life and character of this great man than does the biographical note in the preface. The lesson that this little volume seeks to leave with its readers, is that laboratory methods can never replace accurate clinical observations. It is a much needed lesson in the present era of scientific and pseudo-scientific research.

Management of the Sick Infant: By Langley Porter, D. S., M. D., M. R. C. S. (Eng.), L. R. P. C. (Lond.), Professor of Clinical Pediatrics, University of California Medical School; Visiting Physician, San Francisco Children's Hospital, Consulting Pediatrician, Babies' Hospital, Oakland; Consulting Pediatrician, Mary's Help, San Francisco, and Wm. E. Carter, M. D., Assistant in Pediatrics and Chief of Out Patient Department, University of California Medical School; Attending Physician, San Francisco Hospital, San Francisco. Second Revised Edition. 8 vol. Cloth, pp. 660. 54 Illustrations. Price $8.50. C. V. Mosby Company, St. Louis, U. S. A.

The volume is divided into three parts. Part I contains eleven chapters, as follows: General Considerations; Vomiting; Diarrhea; Constipation; Nutrition; Hemorrhage; Pain and Tenderness; Convulsions and Syncope; Fever; Coughs and Prematurity.

Part II contains ten chapters, as follows: Diseases of the Respiratory Tract; Diseases of the Digestive Tract; Diseases of the Heart and Circulation; Diseases of the Blood and Lymphatics; Diseases of the Nervous System; Skin Diseases; Genitourinary Diseases; Diseases of the Osseous System; Internal Secretions, and Infectious Diseases.

Part III contains four chapters, as follows: Methods; Formulas and Recipes; Drugs, and Poisoning.

This book contains more useful information concerning modern ideas in pediatrics than many books of much greater bulk that we have examined. The illustrations are good and show clearly what they are intended to demonstrate. The chapter on "Methods" is worth the price of the book. We agree with the authors that the concluding chapter of the book on poisoning "does not go exhaustively into the field of toxicology."

Pediatricians who do not own this book will do well to obtain it for reference. Since the general practitioner does a great deal of work among children, he will find in this volume a valuable guide both to diagnosis and treatment.

NATIONAL HEALTH SERIES.

Man and the Microbe: How Communicable Diseases are Controlled. By C. E. A. Winslow, Dr. P. H.; Professor of Public Health, Yale School of Medicine. A description of germs and germ diseases and how they are spread, together with practical methods of disease prevention by means of sanitation.

The Baby's Health: By Richard A. Bolt, M. D., Dr. P. H.; Director, Medical Service, American Child Health Association. How to care for the baby so it will be healthy, will develop properly, and be strong and free from disease.

Personal Hygiene: The Rules for Right Living. By Allan J. McLaughlin, M. D., Surgeon, United States Public Health Service. Practical suggestions as to how to apply personal hygiene to promote health and get the most out of life.

Community Health: How to Obtain and Preserve It. By D. B. Armstrong, M. D., Sc. D.; Executive Officer of the National Health Council. An outline of what the community should do for the health of its citizens and what each person should do to make his community a healthy place.

Cancer: Nature, Diagnosis and Cure. By Francis Carter Wood, M. D.; Director, Institute for Cancer Research, Columbia University. The best statement about cancer ever written for the laity. It tells what it is and how to know it and have it cured.

The Human Machine: How the Body Functions. By W. H. Howell, Ph. D., M. D., LL.D., Sc. D.; Associate Director, School of Hygiene and Public Health, Johns Hopkins University. A non-technical, literary description of the anatomy and physiology of the human body, the most wonderful machine of all.

The Young Child's Health: By Henry L. K. Shaw, M. D., Clinical Professor, Diseases of Children, Albany Medical College. How to care for the health of the runabout from two to six years of age.

Tuberculosis: Nature, Treatment and Prevention. By Linsley R. Williams, M. D.; Managing Director, National Tuberculosis Association. Covers the whole field of tuberculosis, the cause, spread, treatment, prevention and duties of citizens, patients and the community.

The Quest for Health: Where It Is and Who Can Help Secure It. By James A. Tobey, M. S.; Administrative Secretary, National Health Council. A statement of what health is, how it may be obtained and a description of the actual help which the government, states, municipalities, physicians and voluntary health agencies can give to individuals.

Love and Marriage: Normal Sex Relations. By T. W. Galloway, Ph. D., Litt. D., Associate Director of Educational Measures, American Social Hygiene Association. The various elements, biological, social and sexual, which make up a successful and happy married life.

Food for Health's Sake: What To Eat. By Lucy H. Gillett, M. A., Superintendent of Nutrition, Association for Improving the Condition of the Poor, New York. An outline of what and how to eat for maximum efficiency and health building.

Venereal Diseases: Their Medical, Nursing and Community Aspects. By W. F. Snow, M. D., General Director, American Social Hygiene Association. A non-technical discussion of cause, spread, treatment, cure and prevention of each of these diseases and related social hygiene questions.

Taking Care of Your Heart: By T. Stuart Hart, M. D., President, Association for the Prevention and Relief of Heart Disease, New York. How to avoid and prevent heart troubles, which form the leading cause of death in this country.

The Expectant Mother: Care of Her Health. By R. L. DeNormandie, M. D., Boston, Mass. The health care needed during pregnancy in order that both mother and baby may be healthy and well.

Twenty volumes, 18 mo., Flexible Fabrikoid. Average number of pages, 70; price per set, $6.00 net—per volume, 30 cents. Funk and Wagnalls Company, Publishers, New York and London.

The volumes above enumerated belong to a series of twenty volumes known as the National Health Series. In the announcement of these volumes occurs this statement of their *raison d'etre*: "In order to provide the general public with authoritative books on health at low cost, the National Health Council has arranged with the Funk & Wagnalls Company for the publication of the National Health Series. This series will contain twenty books on all phases of human health written by the leading authorities in the United States."

These books are all ably written by authors of unquestionable ability and fitness to write on their respective themes. If the public can be induced to read these little books, great good will be accomplished, as they are provocative of much hard thinking along commonsense lines in the vital problems of health. If there was ever a question that the public needed to consider sanely and thoroughly, it is the question of health—the health of the individual, the health of the community, and their interdependence.

The essential facts are given in an interesting way, and yet are scientific. We have seen books written for the laity, in which the truly scientific was sacrificed and subordinated for the sake of popular style, and have thought this a mistake. The launching of these useful little volumes into the sea of public thought and action, is a commendable undertaking, and we wish each little volume "Bon Voyage."

Texas State Journal of Medicine

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Results of the First Primary are due to be somewhat embarrassing to many well wishers of the public health. In at least two of the important races, an issue of paramount interest has been injected—paramount to many voters. Whether the doctor will be influenced one way or the other, independently of his interest in public health problems, remains to be seen. Meeting the dilemma squarely, the Council on Public Health and Legislation of the State Medical Association, refrains from exerting itself beyond the simple act of repeating the views on public health matters of the several candidates in the run off, in whom the medical profession may have an interest from the standpoint of the public health. We quote from the July JOURNAL:

FOR GOVERNOR.

The August JOURNAL was going to press with the quotations from her platform which was published in the July JOURNAL when the following letter written by Mrs. Miriam A. Ferguson to a member of the Association came into our hands. In fact, the JOURNAL was already on the stone, ready to go on the press, so that the form had to be changed to include this letter, which we believe the medical profession should know about. Mrs. Ferguson states that the questionnaire that was sent her from this office at the same time that questionnaires were submitted to all other candidates for governor, was never received. In fairness to her we quote the letter referred to above as follows:

"I am not opposed to feasible, proper public health activities, and certainly I favor any practicable measure that will better the health of our people and which is a proper governmental function. If the Medical Profession of the State will present a feasible, workable and promising plan for the support of the State Health Department, it will receive favorable consideration at my hands.

"So far as the laws governing the practice of medicine are concerned, we know of no reason for making any changes at this time. The constitution requires that no discrimination be practiced against any school of medicine in the laws controlling the practice of medicine in the State, which would seem to require a single standard for all who would do what the courts maintain constitutes the practice of medicine."

"Judge Felix D. Robertson of Dallas, has pronounced himself in entire accord with the medical profession in its demands for public health and medical legislation. We quote the following from one of his letters:

" 'I am desirous that you and the splendid class of citizens whom you represent, shall be assured of my keen appreciation and respect for and my cordial confidence in the great medical profession as an organization, and my approval of a law which ought to control and add greatly to its usefulness. The law in question, as I understand it, makes the same demand for qualification on all practitioners, independent of the method employed in practice. This would seem to be a just regulation and one needed to protect the public against ignorance and its attending evils.' "

LIEUTENANT GOVERNOR.

"The Honorable Will C. Edwards of Denton, was not considered friendly to the legislation sought by the medical profession in the Thirty-eighth Legislature. He voted for engrossment of the Medical Practice Act in the House of Representatives, but voted for the McNatt amendment exempting chiropractors from the Medical Practice Act. He then voted against suspending the rule and passing the bill without further legislative turmoil, which was

not a kindly thing to do. He likewise voted for the Lewis amendment to exempt the christian scientists from the Medical Practice Act. The following from a letter from Mr. Edwards is further elucidative:

" 'I am quite in sympathy with a revision of public health laws looking to the more efficient and economical administration of the Health Department, and, while I am declining to commit myself in advance on any specific legislation of any kind, I believe a bill can be evolved to meet my ideas; although, of course, I should have no vote except in a tie. I am anxious to provide adequately for the insane of the State, and anything looking toward that would have my sympathetic interest. I believe in the maintenance of the high educational standards for those having to do with the treatment of bodily ills and that, generally speaking, the educational requirements of all practitioners should conform to those standards, fixed with some regard to the interests of all affected thereby. People who know me know that I am for the enforcement of every law, and that I shall strive to be fair to every citizen, to be representative of the whole people and not of any particular bloc or group. I have consistently declined to pledge myself to anybody or to any group as to specific legislation, beyond the promise to try to do that which is fair and just, and I shall continue to adhere to that attitude.

" 'In conclusion, may I add that I am seeking the vote of every voter on that pledge, to be devoted first of all to the interests of the whole people and not any particular part thereof? I am wholly sincere in saying that if I can go into office in a position to serve the whole people, I shall be glad; but if I have to barter away my future actions by pledges as to specific legislation demanded by special groups and interests, then I don't want any office.

" 'In other words, I shall either go to Austin 'my own man,' pledged to be fair and just to all and to render unto the whole people the very best that in me, or I shan't go. If the Democrats of Texas want my kind of folks in office, well and good; I want to serve them. But if they want one who is willing to surrender in advance his independence of action and thought at the behest of any or every organized bloc or interest in Texas, then they don't want me.' "

"The Honorable Barry Miller of Dallas, submits the following highly satisfactory answer to our questions, referred to above:

" 'First: I am a firm believer that the duty of the State is to give the people an efficient Health Department, that they may have advantage of the wonderful strides that have been made in preventive medicine during the last few years. Wherever Boards are necessary for the handling of any public matter, experience has taught me that they should have interlocking terms of office so that there would always be on the Board some with previous experience in the work and purposes of the Board, and certainly a Board of Health should be given sufficient power to make their work effective or it is just a waste of the people's money to maintain it.

" 'Second: I am for the strictest economy in State affairs. The conditions are such that taxation is a burden as great as the people can bear at this time, and I do not want to see any increase in taxes until conditions at least justify such a course, but I surely do not believe that this economy should be practiced at the expense of the unfortunates, whether it is deaf, dumb, blind, the orphan or the unfortunate insane. It is a crime that the insane should be kept in jails. It is a crime that there is not some provision made for their observation, diagnosis and treatment better than we have at this time.

" 'Third: I am in favor of keeping the present Medical Practice Act of this State as it is. About those who practice medicine or attempt to practice medicine, the law should throw every provision essential to the protection of the public who entrust their lives and health to them. I believe that the present Medical Practice Act has more than justified its existence and should not be changed." '

ATTORNEY GENERAL.

"Honorable Dan Moody of Taylor, at the present time the District Attorney of Williamson and Travis counties, assures us that he is a believer in educated medicine, and is desirous of coöperating in any proper manner in enforcing the Medical Practice Act. We quote from his letter:

" 'The Medical Practice Act is a humanitarian measure, and is designed to protect sick and suffering human beings from the dangers incident to placing their physical welfare in the hands of the unskilled and unscientific, who profess to have a ready panacea for the relief of all maladies and physical disorders that affect the human body. I owe my life to the skill and well trained mind and hand of good and faithful physicians, and giving them and their profession tribute from my heart, I would be false to the impulses of my nature and ungrateful to their science, if I did not join with them to help protect the sick and suffering from the danger that lurks about them when they deliver their health, and very often their lives, into the hands of those who know nothing of the art and science of medicine and surgery, and who likely never heard of Pasteur, Banting, Lister, Koch or any of the other outstanding benefactors of humanity in the medical world, who lived and labored for the common cause of man and enobled and embellished your profession.

" 'I, therefore, stand absolutely committed to the rigid enforcement of the Medical Practice Act; and if I am elected Attorney General of this State it will be a pleasure to discharge every duty fixed upon that office by the provisions of that Act, and I will stand ready at all times to give whatever assistance possible to the County Attorneys in their efforts to enforce same. I will not neglect the injunction features of this law, but will see that its provisions are properly enforced.

" 'The public health measures are designed to protect our citizenship, and these laws should be

rigidly enforced. As Attorney General of this State, I would endeavor to see that these laws are given their proper importance and their provisions made effective.'"

"Honorable E. B. Ward of Corpus Christi, has not been heard from."

On the whole, the legislative situation looks promising for the public health. Several interesting contests have developed, however, and the medical profession will do well to give some attention to these. The policy of the Council on Legislation and Public Instruction is to "hands off," except in the instance there is a debt to pay, and even then, intervention is a matter of invitation from the local profession. The burden of citizenship falls heavily on the medical profession at this time. There is much unrest and considerable uncertainty as to just what is important and what is not so important. It takes a level minded individual to know just what to do. Prejudice is a strange animal, which accounts for the fact that "politics makes strange bed-fellows."

The A. M. A. at Chicago.—As had been anticipated, both because of its central location and the fact that it is the home of the Association, the Chicago Session was the biggest ever. It was equally as successful in other particulars. The registration was 7,668, which is 1,200 more than the largest previous registration. Of these, 149 were from Texas, as follows:

Drs. Royal Stuart Adams, San Antonio; J. H. Allen, Justin; Bruce Allison, Fort Worth; Boyd D. Alexander, Waco; E. J. Arendt, San Antonio; Murff F. Bledsoe, Port Arthur; Arthur Brown, Fort Worth; W. L. Brown, El Paso; R. W. Baird, Dallas; R. E. Barr, Orange; Joe Becton, Greenville; John F. Bell, Oakland; J. H. Black, Dallas; Jno. W. Black, Bryan; J. W. Bourland, Dallas; H. H. Brown, Sr., Yoakum; J. W. Burns, Cuero; Howard M. Bush, San Antonio; D. B. Beach, Hamilton; W. W. Beach, Mason; W. G. Cook, Fort Worth; George T. Caldwell, Dallas; W. A. Carroll, Claude; David W. Carter, Jr., Dallas; E. H. Cary, Dallas; Ira C. Chase, Fort Worth; Chas. Collins, Waco; H. F. Connally, Waco; W. W. Coulter, Houston; E. D. Crutchfield, Galveston; Hines Clark, Crowell; Rogers Cocke, Marshall; Alden Coffey, Fort Worth; Hatch W. Cummings, Hearne; N. A. Davidson, Harlingen; J. Spencer Davis, Dallas; G. P. Day, Madisonville; Harold M. Doolittle, Dallas; N. L. Dudley, Goose Creek; Malone Duggan, Austin; Elbert Dunlap, Dallas; Doyle L. Eastland, Waco; H. Earle, Waco; T. S. Edwards, Knox City; William E. Fowler, Huntsville; J. M. Frazier, Belton; Willis H. Flamm, Amarillo; A. H. Fortner, Sweetwater; G. B. Foscue, Waco; T. E. Fuller, Texarkana; Nelson F. Fisher, Dallas; Roy Goggans, Dallas; Chas. C. Gidney, Plainview; Joe Gilbert, Austin; Robt. B. Giles, Dallas; Everett L. Goar, Houston; Marvin L. Graves, Galveston; Neil E. Greer, Lockney; C. M. Grigsby, Dallas; John G. Guenther, Maulton; Ellis F. Gates, Eagle Pass; David Greer, Houston; Jesse W. Hale, Yoakum; Nell M. Hester, Buffalo; C. O. Hook, Fort Worth; M. C. Hagler, New Braunfels; N. B. Halley, Ballinger; H. D. Harlan, Beaumont; Chas. H. Harris, Fort Worth; Titus H. Harris, Galveston; Will S. Horn, Fort Worth; J. J. Horton, Eagle Pass; Robert Ernest House, Ferris; F. E. Hudson, Stamford; S. F. Humphreys, Nocona; J. T. Hutchinson, Lubbock; Judd E. Hammond, Munday; Norma Ellis Israel, Houston; Sidney Israel, Houston; Geo. M. Jones, Smithville; I. S. Kahn, San Antonio; Nettie Klein, Texarkana; Oliver B. Kiel, Wichita Falls; D. H. Kendall, Houston; J. E. Killian, Milford; R. W. Knox, Houston; L. W. Kuser, Gainesville; Kenneth M. Lynch, Dallas; W. W. Latham, Crockett; Carl Lovelace, Waco; R. H. T. Mann, Texarkana; Ernest C. Mead, Gainesville; H. F. Miller, Slaton; Sallie W. Miller, Slaton; Chas. L. Martin, Dallas; J. M. Martin, Dallas; O. N. Mayo, Brownwood; I. L. McGlasson, San Antonio; Geo. S. McReynolds, Temple; J. C. Michael, Houston; Edmund D. Mills, Beaumont; Robt. H. Millwee, Dallas; H. Leslie Moore, Dallas; J. M. Moore, San Antonio; C. L. Maxwell, Myra; T. P. McLendon, Constance; John O. McReynolds, Dallas; E. F. Mikeska, Taylor; C. C. Nash, Dallas; Oscar L. Norsworthy, Houston; Frank H. Newton. Dallas; May Owen, Fort Worth; Jones W. Powers, Wichita Falls; C. U. Patterson, Houston; T. A. Pressly, Runge; Edward Randall, Galveston; Curtice Rosser, Dallas; S. C. Red, Houston; S. P. Rice, Marlin; Dalton Richardson, Austin; T. G. Rumph, Fort Worth; E. W. Rheinheimer, El Paso; Stephen A. Schuster, El Paso; A. C. Scott, Temple; Chas. E. Smith, Mart; O. D. Steinwinder, San Antonio; August H. Streit, Marlin; Martin E. Taber, Dallas; Holman Taylor, Fort Worth; Martin J. Taylor, Houston; Wilbur F. Thomason, Beaumont; R. B. Touchstone, Lytle; W. G. Trice, Axtell; W. F. Thompson, Beaumont; C. B. Thayer, Gainesville; Henry B. Trigg, Fort Worth; Ralph E. Utley, Harlingen; Walter T. Wilson, Navasota; Webb Walker, Fort Worth; R. A. Webster, Clyde; Marcus A. Weems, Columbia; A. W. West, Wichita Falls; R. T. Wilson, Temple; J. M. Witt, Waco; Fleta Woolsey, Waco; Wm. Jenkens Woosley, Penelope; J. Z. Young, Buckholts; D. J. R. Youngblood, Breckenridge.

All of the activities of the session were housed in the large municipal pier, which is said to be a mile long (and having walked it, we do not doubt it). No more convenient arrangement could have been devised. Something better by way of ventilation, and perhaps more comfortable seats would have been an added advantage, but their absence was more than compensated for by the convenience of location. In a city the size of Chicago, the meeting places will always be some distance from the majority of the hotels. The distance of the municipal pier from the hotels was, therefore, not considered by those of us who habitually attend these meetings. The fact that some discrimination could be exercised in selecting the papers to be heard, and then the opportunity to put in the time between sessions in looking over the

splendid commercial and scientific exhibits, was thoroughly appreciated by those who planned their movements and proceeded on a systematic basis to make the best use of their time.

The House of Delegates met in the assembly room of the new Association headquarters, which was the only meeting held at a distance from the pier. This was a splendid idea, not only because our law-makers were thus separated from the diverting influences of the place of general assembly, but it gave them an opportunity to inspect the plant of the Association, with which they have to do in their capacity as legislators. Texas was represented by a full delegation, as follows: Drs. Holman Taylor, Fort Worth; S. P. Rice, Marlin; Joe Becton, Greenville; J. W. Burns, Cuero, and A. C. Scott, Temple. Dr. Taylor was made chairman of the Reference Committee on Reports of Officers, and Dr. Becton was a member of the Reference Committee on Hygiene and Public Health.

The program of the scientific assembly, it appears, was most interesting. Participating in this program were several Texas physicians. Dr. Kenneth M. Lynch of Dallas was chairman of the Section on Pathology and Physiology, and presented as his chairman's address, a paper on "The Specialist in Pathologic Anatomy." Dr. I. L. McGlasson of San Antonio, was vice-chairman of the Section on Dermatology and Syphilology. Dr. McGlasson opened the discussion of a paper on "Glucose Tolerance Reactions in Eczema," by Samuel Ayres, Jr., Los Angeles. Dr. Jno. O. McReynolds of Dallas, is on the executive committee in the Section on Ophthalmology. Dr. W. L. Brown of El Paso, read a paper on "Further Observations on the Treatment of Postoperative Vomiting, Distention and Peritonitis by Continued Drainage and Lavage with the Duodenal Tube and Massive Hot Applications." Dr. H. H. Stark of El Paso, read a paper on "Conjunctivitis Infectiosa Necroticans (Pascheff)." Dr. N. F. Fisher of Dallas, read a paper on "The Regeneration of the Pancreas." Dr. Custice Rosser of Dallas, read a paper on "Rectal Pathology in the Negro—Incidence and Peculiarities (Lantern Demonstration)." Dr. H. G. Walcott of Dallas, opened the discussion of the paper by Dr. John Bryant of Boston, "A Diet for the Chronic Intestinal Invalid." Dr. Charles L. Martin of Dallas, opened the discussion of a paper by Drs. A. C. Ivy and B. H. Orndoff, Chicago, on "Studies on the Effect of Roentgen Rays on Glandular Activity; the Effect on Gastric Secretion of Exposure of the Abdominal and Thoracic Areas in Roentgen Rays; A Note on Roentgen Cachexia."

The scientific exhibits surpassed any ever assembled by the Association, at least in point of practical instruction. Several of the exhibits had attendants who discussed the exhibits continuously, and there was always a crowd to hear. The moving picture theater was well attended and the subjects demonstrated well selected.

The commercial exhibits were likewise attractive. Practically all of our old friends were on hand with the latest in their respective lines, both for sale and for demonstration, and there were several newcomers. The practicing physician situated away from the centers of surgical and medical supply, revelled in these exhibits, and the exhibitors profited correspondingly.

The social activities appear to have given satisfaction. We do not know much about these, but the receptions we personally attended were all that could be desired by the socially inclined. The most notable feature of this character was the magnificent testimonial dinner to Dr. George H. Simmons, commemorating his twenty-five years' service as Editor of *The Journal* and General Manager of the Association, which positions he was relinquishing. Dr. Simmons will hereafter be attached to the Association in an advisory capacity. The dinner was arranged by a committee of distinguished physicians from different sections of the United States, and was on a subscription basis. Representatives of various organizations of educators and scientists throughout the country, were present. The attendance was something more than three thousand. A splendidly executed, life-sized oil portrait of Dr. Simmons was presented to him at this time. Numerous speeches eulogistic of Dr. Simmons were delivered, and they were received with great enthusiasm. It did not appear that the assemblage had any idea of giving Dr. Simmons up entirely to his golf. So far as we are concerned, we are hopeful that his influence will remain potent in the affairs of medicine in this country so long as he lives. When he has passed to the great beyond, we know that the good he has done will live after him.

The Trustees decided to place the Secretary, Dr. Olin West, in charge of the affairs of the Association as Acting General Manager, with Dr. Morris Fishbein as Acting Editor of *The Journal* and Dr. Will C. Braun as Acting Business Manager. This arrangement will hold until the next annual meeting of the Board of Trustees, in February, 1925.

The House of Delegates took occasion to honor two of its trusted servants. Dr. Frank Billings, for many years a member of the Board of Trustees, and at one time presi-

dent of the Association, was warmly and enthusiastically thanked for his services, and assured of the love and affection of the medical profession of America because of his own personal worth. The memory of Mr. William Whitford, for many years at the head of the stenographic force of the Association, and recorder for the House of Delegates, recently deceased, was perpetuated by the adoption of suitable resolutions.

The following officers were elected for the ensuing year: President-elect, Dr. W. D. Haggard of Nashville, Tennessee; Vice-President, Dr. E. B. McDaniel of Portland, Oregon; Secretary, Dr. Olin West (Tennessee); Treasurer, Dr. Austin A. Hayden, Chicago; Speaker of the House of Delegates, Dr. Frederick C. Warnshuis of Michigan; Vice-Speaker, Dr. Rock Sleyster, Wauwatosa, Wisconsin; Trustees, Drs. W. H. Walsh of Illinois, Edward B. Heckel of Pennsylvania, and Thomas McDavitt of Minnesota.

The next annual session will be held in Atlantic City, New Jersey, providing suitable arrangements can be made for hotel accommodations. The whole matter is left with the Board of Trustees. If satisfactory hotel and other arrangements cannot be made in Atlantic City for the accommodations required, the Trustees are authorized to select either Atlanta, Georgia, or St. Paul, Minnesota—or to go elsewhere, if necessary. It has happened that hotels, particularly, have not carried out promises made to the local profession when invitations were extended and before decision was arrived at. The Trustees have been requested to make announcement of the time and place of meeting within sixty days after adjournment of the annual session.

The Woman's Auxiliary of the A. M. A., under the presidency of Mrs. S. C. Red of Houston, held its annual session coincident with that of the A. M. A. We are not informed as to its transactions, but understand that they were highly gratifying to those responsible for the extension of that organization and its successful operation. Mrs. Red addressed the House of Delegates of the A. M. A., and was received with cordiality and enthusiasm.

The State of Organization of the A. M. A. is clearly shown in the several reports presented to the House of Delegates each year, most notably those of the secretary and of the Board of Trustees. These reports were particularly gratifying this year. The secretary informs us that the membership was, at the time of his report, 90,056, which is an increase of 1,537 over that reported for last year. The Fellowship roster also shows a gain. There are now 54,063 names on this list, which is 619 more than last year. The difference between membership and fellowship is, no doubt, well understood. The former represents the membership of county societies and the latter those who have paid a fellowship fee of $5.00, including subscription to *The Journal*. There are 54 constituent state and territorial associations. Six of these, namely, California, Missouri, Ohio, Texas, Wisconsin and Virginia, employ full-time secretaries. There are thirty-one state medical journals, some of which represent more than one state. The secretary reports that most of the state organizations are doing good work, although in many of the states numerous independent organizations are being formed, which he considers may be an indication of lack of interest on the part of the regular organization. It is our observation that this is largely true. There are special interests, no doubt, which require special organizations, but for the most part, the regular establishment could care most economically and most certainly for the varied interests of the medical profession, and it should be able to offer to the physician the fellowship, information and encouragement, that he needs in his professional and social endeavors.

As pointed out by the secretary, ours is a thoroughly democratic form of control, and it should be uniformly applied, else it is not democratic. There are insufficiencies in the organic laws of the National, State and County organizations which should be corrected, and these instruments made more nearly cooperative. He does not advise centralization, but does believe that the authority granted to subordinate bodies should be so outlined as to do away with ambiguities. A subordinate body should not, as a matter of course, be in a position to block the efforts of its parent body, whether the parent body be such by virtue of inheritance or adoption. No doubt about it, the bonds of federation should be binding, or it is no federation at all, but it should never be forgotten that the combination of interests is always for the greatest good of the greatest number, with due regard for the rights of the minority. Quite probably, well planned efforts will be made to clarify the relationship of component county societies, constituent state associations and the national body. It will be recalled that we in Texas are at the present time busily engaged in rewriting our own constitution and by-laws.

The Trustees tell us that financially we are doing very well, indeed. While it seems that we haven't any money to throw away,

there are ample funds for necessities. Since last year, the net worth of the Association has increased $153,736.58. This amount represents the net income for 1923, of $140,159.38, and the interest on the reserve funds of the Association, $13,577.20. Our total worth appears to be, $1,455,825.19. The effect *The Journal* has had on our finances can be judged by the statement of the auditors that the net profits from its operation for the year amounted to $301,683.33. This was an increase over the preceding year. The income from advertising exceeded the receipts from dues and subscriptions, by $149,727. There were 2,866 advertising pages, as compared with 2,714 during the previous year. Last year, a decrease of 112 in the number of subscriptions to *The Journal* was reported. That was the second time in twenty-five years that such a thing had happened, the other time being during the second year of the World War. This year, there has been a gain of 1,400, the total subscription list being 80,958. Of the special journals, it seems that only two have made profits, namely, *The American Journal of Diseases of Children* and the *Archives of Surgery*. The Spanish edition of *The Journal* is still losing money, but in an amount this year but little more than half that of the previous year. The *Quarterly Cumulative Index* lost over $8,000, which was considerably in excess of the loss of the year before. This very helpful publication has been extending its scope, and the loss was expected; in fact, it is expected that it will continue to lose money for some years to come. *Hygeia,* our lay medical magazine, continues to lose money, also. The total circulation of this publication was reported as 23,687. This number includes 14,175 physicians, and it is estimated that the majority of the 9,512 laymen who take the magazine have had their subscriptions paid for by doctors. Eight county medical societies in eight different states, have subscribed for 4,422 copies to go to laymen. The Alleghany County Medical Society of Pennsylvania, led with a subscription list of 1,670. The loss for the year amounted to $38,990.84. It will be several years before *Hygeia* is self-supporting, no doubt. In the meantime, it is rendering a most wonderful service to the cause of good health. It is to be regretted that physicians and welfare organizations interested in the health of the public, will not be more vigorous in bringing this publication to the attention of the reading public. The news stands are loaded with health magazines which carry false, and many of them hurtful, messages to the public, and the advertising pages of which are as poisonous as the venom of our own Texas rattlesnakes, without the saving grace of the rattle to warn the sojourner who is about to be bitten.

The Council on Pharmacy and Chemistry continues to hold forth at the old stand and spread the same shelter over the gullible medical profession, a fact we are prone to forget. The work of this Council has continued to increase in value, even though the spectacular part has been nearly accomplished. We are told that not a single proprietary preparation of the shotgun mixture type has been successfully introduced to the medical profession of this country since the Council was started. While many of the manufacturing concerns still resent the interposition of the Council, an increasingly large number of them have come to nominally, at least, support that institution, which is encouraging.

It would surprise the average member, we are sure, to know the amount of money spent by the A. M. A. in supporting original research. The report of the Board of Trustees is illuminating in this respect, and should be read. The list is too long for repetition.

The propaganda department continues to function vigorously and effectively. In fact, it is daily increasing its reach. During the last year the number of inquiries received from laymen increased more than twenty-five per cent over those of the previous year. Schools, magazines and educational institutions of a variety of types, are using this department in an effort to protect their constituents from medical imposition and fraud. "Nostrums and Quackery" reflects this activity in its steady sale. More than a million pamphlets bearing on quackery, have been issued by this department during the year, including a pamphlet of special value on the Abrams cult.

The completion of the additions to the headquarters at Chicago, is reported. The Association now has a fireproof building fronting 100 feet on Dearborn Street and 160 feet on Grand Avenue, six stories high and basement. This building cost nearly $500,000, and it is a credit to the medical profession of this country.

The Bureau of Legal Medicine and Legislation has been active along the lines set out for it by the House of Delegates, covering the national prohibition act, the narcotic law, the Veterans Bureau, the Sheppard-Towner maternity act, the federal income tax, medical malpractice, medical practice acts, animal experimentation and the like. The more pertinent of these subjects will be discussed elsewhere.

The House of Delegates, pursuant to provisions of the by-laws, made a reapportion-

ment of delegates, by which Texas lost a delegate. There was no way to avoid this loss, and it is anticipated that the lost delegate will be regained next year. Under the present law there can be but 150 delegates in the House. After taking out the number of delegates due the scientific sections, the balance is apportioned among the several constituent Associations, in accordance with membership. The division is made every three years. There were 132 delegates to be divided, and 90,056 members. That meant one delegate for each 950 members or fraction thereof. Texas has a membership of 3,650, which gives her four delegates. The last apportionment was made on a basis of 850, which gave us five delegates. An amendment to the constitution has been introduced, and doubtless will pass, raising the number of delegates to 165, which will restore all of the losses sustained, without denying any Association the gains that have come by virtue of increased membership.

The following definitions were advanced by the judicial council, and approved by the House of Delegates:

Sectarian.—"A 'Sectarian,' as applied to medicine, is one who in his practice follows or claims to follow, a dogma, tenet or principle based on the authority of its promulgator to the exclusion of demonstration and experience."

Physician.—"A 'physician' is one who has acquired a contemporary education in the fundamental and special sciences comprehended in the general term 'medicine,' used in its unrestricted sense, and who has received the degree of Doctor of Medicine from a medical school of recognized standing."

The following amendment to the by-laws was introduced, and will be voted upon at the next annual session:

"Amend Chapter 4, Section 1, by inserting after the first sentence, the following: 'At some time between the first and fourth day of the annual session of the House of Delegates, the chairmen and the secretaries of the various sections of the Scientific Assembly and the members of the Council on Scientific Assembly shall meet at the call of the chairman of the Council on Scientific Assembly and shall prepare and present to the House of Delegates at their meeting on the fourth day of the annual session of the House of Delegates, three nominees for the office of President-Elect and two nominees for the office of Vice-President, and the nominees so presented shall be the only ones elegible for election.'"

It is not likely that the proposal will receive favorable consideration. It is reactionary in character, and these are not reactionary days, to say the least of it. In addition, the effort is apparently to take away from the House of Delegates the responsibility of selecting the President and Vice-President of the Association, with a free hand. It is not likely that that body will submit to anything of the sort.

Again the Alcohol Question. — Several resolutions bearing on the question of alcohol in the practice of medicine, were introduced in the House of Delegates during the Chicago Session of the A. M. A. The following resolution, introduced by Dr. T. C. Chalmers of New York, was unanimously adopted:

"*Whereas,* The use of alcohol in medicine by physicians is limited, regardless of the condition of the patient by the National Prohibition Acts, and

"*Whereas,* The confidential relations maintained between the physician and his patient are violated by the said National Prohibition Acts, and

"*Whereas,* The interests of the patient and the success of the physician require that such medicinal alcoholic liquor as is prescribed in the treatment of disease be of known purity and alcoholic content, and

"*Whereas,* This can be accomplished only by the marketing of bottled in bond alcohol for medicinal purposes in containers suitable for dispensing, unopened, by the pharmacists in such sizes as will meet the patient's needs; be it

"*Resolved,* That the House of Delegates of the American Medical Association expresses its disapproval of these portions of the National Prohibition Acts which interfere with the proper relation between the physician and his patient in prescribing alcohol medicinally.

"*Resolved,* That the House of Delegates of the American Medical Association instruct the Board of Trustees to use its best endeavor to have repealed such sections of the National Prohibition Acts as are in conflict with the above resolution and also use their best endeavor to have the Commissioner of Internal Revenue and the Prohibition Commissioner issue revised instruction on the use and the prescribing of alcoholic liquors for medicinal purposes by physicians."

The following resolution, introduced by Dr. Southgate Leigh of Virginia, was also unanimously adopted:

"The rules in reference to the prescribing of liquor for the sick seem to have been changed to such an extent that the state directors have no authority in permitting more than one pint in ten days in extreme cases.

"We recently wrote to the prohibition director of Virginia requesting a permit to prescribe more than a pint for a prominent citizen, aged 86, who had been forced to buy whiskey of uncertain quality to augment the amount permitted. This was on account of his debilitated condition.

"We appealed to the director on humanitarian grounds, but the request was refused with the statement that under the present rules no such exception could be allowed.

"Feeling that this is a matter, not of prohibition, but of common sense and humanity, we would urge that the American Medical Association go on record as favoring a revision of such drastic rules."

The House of Delegates of the American Medical Association contains as many and as rabid prohibitionists as may be found in any similar group anywhere in this country. There was much warm debate, as a matter of course, but the action finally taken appeared to be agreeable to all concerned.

It was quite evident, whatever else may be said, that the medical profession is growing restive of the thoughtless restraint, to be

polite about it, placed by bureaucrats on its performance of duty to the public. This is significant to us in Texas, in view of the fact that the two remaining candidates for Governor in this great State are apparently very much concerned that a few members of the medical profession have abused their God-granted and legally-perpetuated privilege of prescribing what they please for the alleviation of distress and the cure of disease. It is to be hoped that those of us who feel keenly the value of restraint in dealing with the subject of alcohol, will not lose sight of the greater value of noninterference of the free will of the licensed and approved practitioner of medicine. It is fair to conclude that in the fullness of time, the outlaws in the ranks will be brought under control, as has inevitably been the case with outlawry whenever and wherever found among people progressing in civilization. The following resolution, bearing on this phase of the situation, was also unanimously adopted:

"*Whereas*, The honor and integrity of the medical profession are being discredited by the unnecessary, unprofessional and unlawful prescribing of alcoholic liquors by some unscrupulous physicians; be it

"*Resolved*, That in the judgment of the House of Delegates of the American Medical Association, in session assembled, every state and county medical association should use their best endeavor to discipline physicians who either negligently or wilfully prescribe alcoholic liquors otherwise than in accordance with the law, and to purge the medical profession of physicians who wilfully, under the cloak of their profession, prescribe alcoholic liquors for other than medicinal purposes; and be it

"*Resolved, Further*, That the Secretary of this Association forward a copy of this resolution to the federal prohibition officer in Washington and to every state prohibition officer of the United States with a request for their co-operation."

The purpose of this resolution is clear, and is good, but we are afraid it will be unfortunately used in some states. There is no danger in Texas, for the reason that the prohibition enforcement officer and the State Medical Association are co-operating beautifully and satisfactorily, but in some states the enforcement of the Volstead Act seems to be in the hands of persons not so kindly disposed.

Few acts of the medical profession have created such favorable lay comment as the adoption of these resolutions. The newspapers in Chicago were full of editorial and, without exception, lauditory references to this frank and emphatic stand. The following is quoted as representative of these:

"When the assembled physicians in this city said that the Volstead act stands between doctor and patient, they told the truth. When they asked for changes that would stop this interference, they performed a public duty.

"A physician may prescribe as much arsenic or strychnine as he thinks necessary. He may give morphine, heroin or cocaine with no restrictions that affect his ordinary work. But when it comes to the medicinal use of alcoholic beverages, his hands are tied. He can use only a small amount of distilled liquors, and malt liquors and wine not at all.

"The theory seems to be that congress knows more about the practice of medicine than do men who devote their lives to it, and that beer is more dangerous than opium. Even the most fanatical camel driver can scarcely insist on maintaining such views as that. The law should be modified in the way that the physicians suggest."—Chicago *Journal*.

Also the following:

"Physicians who object to the provisions of the Volstead act regulating the use of alcohol in the practice of medicine are unanswerable. If the law allows a physician to prescribe spirits for a patient, as it does, the dosage is entirely a matter for the physician's judgment and not for congress to prescribe.

"The law adopts a principle which makes congress the doctor. The arbitrary dictum is that a patient may be given a pint of whiskey every ten days as medicine, but no more, regardless of the opinion of the doctor in the case.

"Congress might have declared that whisky had no medicinal value. Some physicians hold that it has no peculiar medical value. Others contend that it has. In practice they can follow their own opinions. They will all agree that if it has value the doctor who prescribes it at his own discretion should have discretion as to the amount.

"Congress went on the assumption that the medical profession would misuse the prescription blanks. The drys decided that the person who violated the intent of the law and got whisky as a beverage because it was legalized as a medicine should have just as little satisfaction out of it as possible. Of course they did not reach the man they intended to reach. The unscrupulous physician has no difficulty with this limitation. He has many expedients by which it can be avoided. The scrupulous physician finds that his practice is controlled by a law which affronts both his intelligence and his honesty.

"It is an absurd theory that congress may substitute itself for the physician in the treatment of disease, and it is no wonder that many physicians resent such an ignorant and dictatorial interference with medical practice."—Chicago *Tribune*.

The Problem of Medical Education Again to the Front.—For several years it has seemed that the at one time perplexing problem of medical education was about to establish a sort of sea-level, and that henceforth it would be a matter of the ebb and flow of the tide. The report of the Council on Medical Education and Hospitals, at Chicago, was the usual competent discussion of the subject. According to that report, the supply of medical students had again reached the high-water mark, and the alleged shortage of physicians was being overcome, even though the public found it necessary to motor to the centers for much of its first class medical service, and go to hospitals wherever such institutions could be found or founded. The following quotation from the report presents the views of the Council on that phase of the subject, in a nut shell:

"There is undoubtedly an unequal distribution of physicians, whereby the cities are better supplied than the rural communities. There has always been a scarcity of physicians in rural districts, although doubtless the shortage in numbers has become more pronounced in recent years. This does not mean, however, that the people in rural communities are not as well supplied with medical service as formerly, since the phone and other means of rapid communication are enabling each physician to cover a much larger territory than heretofore. There are certain districts, however, which do not have physicians and where others are not easily available. Investigation shows, however, that, with very few exceptions, they are neighborhoods where it is practically impossible for a physician to make a livelihood."

The Council suggested three schemes whereby communities in which physicians can hardly obtain a fair living, may sell medical service, as follows:

"1. One scheme that has been tried in a few instances is to have a group of citizens guarantee an income of $2,500 or $3,000 a year, or more, for a physician.

"2. One State, New Hampshire, has passed a law enabling the people of the county or community to tax themselves in order to support a local physician. No definite results from this plan have as yet been reported.

"3. In Iowa and some other states, laws have been passed to enable citizens of any county or community to tax themselves for the support of a small hospital. With a hospital, one or more competent physicians can usually be obtained."

The President-Elect, Dr. Pusey, threw a monkey-wrench into the machinery when he made certain recommendations to the House of Delegates covering the high cost of medical training, and also the high cost of training nurses. Dr. Pusey held that we are not furnishing the people who need doctors with the service they need, when and where they need it. He said, in this regard, that while there may be an excess of any commodity, including physicians, there might as well not be an excess if a considerable portion of those who require the commodity cannot secure it. He asserted that the argument based on economic and social conditions, which attempts to account for the unequal distribution of medical service, if not shortage, is simply another way of saying that our graduates are in this day and time above the rural districts. Specifically speaking of the remedies suggested for this condition, he said:

"The remedies offered are in line with the explanations. Let the rural districts improve their economic and social conditions up to our standards. Let them provide hospitals and laboratories. Let them make improvements in transportation; build good roads and buy automobiles, even establish ambulance services, so that their people can go to the places where the physician is willing to live. These remedies are practically laying down the terms on which the country can get our services, and the more successful ones of us and the newer generation are laying down similar terms in the cities. They do, in fact, carry the bald inference that, if the situation is to be corrected, the 40,000,000 or 50,000,000 people in the rural districts will have to change their ways to meet the demands of the 30,000 or 40,000 physicians that they are going to need. I do not believe that, in the end, either the city or the country is going to make any appreciable alteration in its economic and social conditions in order to avail itself of our services. Specifically, I believe it is impractical to expect that the rural part of the community is going to reconstruct itself, within any future so near as to be of any interest to us, in such a way as to meet the demands of one-tenth of one per cent of its population, no matter how necessary that one-tenth of one per cent may be to it."

He urged further, that the contemplated plans of establishing medical centers with small hospitals and laboratories; the guaranteeing of income by volunteer subscriptions or by taxation; the establishment of scholarships, on the condition that the scholar return to those who educated him, and even the building of hospital and medical centers through governmental or other outside aid, are socialistic tendencies and likely to prove exceedingly harmful, both to the medical profession and the public it serves.

The plan Dr. Pusey suggested was, in effect, that the length of time devoted to the education of physicians be reduced, and the cost correspondingly brought within bounds, by a course of three years of training in a medical college, with a hospital internship of a year and a half, based on an accredited high school education, and a careful selection of students on the ground of fitness. He urged that at the present time, according to statistics, the medical student can hardly hope to graduate and enter the practice of medicine until he has reached the age of 28, and his education will cost him from ten to twelve thousand dollars. By providing such a basic education as suggested, Dr. Pusey hoped to reduce the age below 25, and furnish doctors who would be willing to go to rural communities for the practice of their profession. He would not agree to a reduction in the present high standards of medicine for those who would excel in their profession, and he would not agree to a reduction of the practical requirements of even the basic course of medicine suggested, but urged that much of the instruction given in medicine at the present time is really preparation for the specialties, and much of the preliminary education required is of no practical value. None of the other professions require so much of their students. In the general field of education there are the ordinary degrees, and in addition to these the higher degrees, such as "Ph. D.," and the like.

The Council on Medical Education and Hospitals urged, and the Reference Committee supported the Council in its position,

that the number of years spent in the study of medicine could be greatly reduced, and practically the same ends sought by Dr. Pusey attained, by condensing the high school course. The Reference Committee was afraid that suggestions looking to any reduction in the medical or preliminary curricula might be construed as an invitation to mediocracy and a recession from the high stand taken by the medical profession in its demands for education. At the same time, any further increase in educational requirements was discountenanced.

The House of Delegates referred Dr. Pusey's address to the Council on Public Health and Legislation, with instructions to carefully consider the problem in the light of his very excellent address.

Whatever comes of the agitation, and we have no present idea that Dr. Pusey's suggestion will be accepted, there will doubtless be a material reduction in the amount of time and money required of the medical student before he can enter the practice of medicine, and every effort made to produce doctors who will be willing to earn their reputation at the bedside in general practice, rather than in the teaching hospitals and laboratories of great institutions of medical learning.

The Middle Man in Medicine.—The idea of trafficking in sick people long ago received the emphatic stamp of disapproval of the medical profession, in the matter of splitting fees. The conclusion was promptly reached that no self-respecting doctor would refer patients for services he himself could not render, to the specialist who would make the most advantageous division of the fees received therefor.

The Judicial Council, at Chicago, called attention to a state of affairs which is developing in the field of medicine and which, while not of this character, exactly, may conceivably serve to so unfavorably influence the interests of the practicing physician and his personal relationship to his patients, as to amount in the long run to calamity. It was pointed out that certain corporations, which may be designated as life extension institutes, are employing physicians to make periodic (or otherwise) physical examinations of persons referred to them, at a fixed rate per examination, and then selling the information thus secured, either to those examined, or to life insurance companies or others interested in the matter. In view of the emphatic stand taken by the medical profession in support of the periodic examination idea, and the good that can and will undoubtedly come of such procedure if placed in general operation, physicians were prone to enter into contracts with these corporations, and for the small stipend offered render the large return anticipated, with no concern as to the ultimate results of the system. It seems that this has proven quite a profitable enterprise in certain instances, and that in certain instances the promises of corporations to use the income from common stock for philanthropic purposes and not for personal profit, have not been carried out. In at least one instance, large dividends were paid on preferred stock, but no dividends declared on common stock. In other words, at least some of these corporations have been jobbing the services of the medical profession. This is not exactly fee-splitting, but it is commercializing the practice of medicine. It is true that these institutions do not prescribe for their clients, except to advise as to diet, exercise and hygienic measures, but unquestionably they have taken the first steps in the direction of treatment, and the Council very pertinently desired to know when the second step would be taken.

This question was considered by the House of Delegates as a committee of the whole, and the following resolutions reported back and unanimously adopted:

"*Resolved*, that the Committee of the Whole recommends to the House of Delegates that the practice outlined in the supplementary report of the Judicial Council be condemned as against the best interests of the public; and be it further

"*Resolved*, that the Judicial Council be instructed to carry on an educational campaign in conjunction with the state societies and to co-operate with other councils and bureaus of the American Medical Association in the promotion of periodic health examinations by family physicians."

The Judicial Council ruled that the following resolution was not exactly pertinent to the situation, and it failed of adoption by the House of Delegates:

"*Resolved*, that the practice of medicine for a definite amount per day, month or year with an indefinite service, is against the principles of medical ethics, as defined by the American Medical Association."

The First Guns in the Publicity Campaign have been fired, and the assault is under way. The smoke of battle has not cleared sufficiently for us to speak with certainty of the results attained. We will undertake to give a complete account of the engagement in our next issue. In the meantime, we may say that we have opened the fight in approximately seventy-five communities of the State. and that from many of these the advance will extend into nearby communities. A Lecture Bureau has been tentatively organized, and speakers furnished with data necessary to aid materially in preparing addresses along the several lines of our interests. Lecturers are constantly being added, and

every opportunity to cover suitable platforms is being taken advantage of. The newspaper advertising has been extensive, and, so far as we have been able to learn, its character has not been objected to. It consisted of a dignified appeal to the public, in display form, covering half-page space in the newspapers, followed by a quarter-page display of some attractive fact of scientific medicine. This advertising has been accompanied, of course, with reading notices of such character as the newspapers decided upon, which is by way of news rather than advertisement. The cost of the campaign has not been as great as had been expected, but it has been enough to indicate the importance of the undertaking.

The Council on Legislation and Public Instruction feels that while probably there is much to be wished for in the matter of attainment, we have done very well, indeed. It is appreciated that this is a pioneer movement, and rather audacious in character. It was not undertaken without due deliberation and mature consideration of every conceivable factor involved. We await with considerable interest the final outcome of this innovation, and its reception by the medical profession and the public of the entire country.

A New New Orleans Medical and Surgical Journal came to us in July. It is No. 1 of Volume 77 of that ancient and honorable publication. It is now full-grown, being uniform in size with practically all of the other state journals. It is robed in white and bears all of the earmarks of a real, scientific and ambitious medical journal. It carries thirty-four pages of fine, ethical advertising, in addition to which it has a subscription list comprising the entire membership of the State Medical Society of Louisiana and the State Medical Association of Mississippi. It is the property of the first named organization. We welcome the new journal, and cheerfully move over, that it may have a portion of our place in the sun.

It is needless to recall here the history of this publication. We believe we have referred to that matter before. Our pride in Southern medical journalism is sufficiently well developed to make us somewhat ambitious for its future. A journey through the past volumes of this publication would be a treat, indeed. It has numbered among its contributors the best and foremost physicians of this country. It has been in the forefront of medical progress through all of these years, notwithstanding certain periods of depression, concerning which we need advance no discussion. It has increased opportunities for the future. We trust and believe it will take advantage of them.

ORIGINAL ARTICLES

THE PRESENT DAY MANAGEMENT OF DIABETES MELLITUS.*

BY

DAVID W. CARTER, JR., M. D., F. A. C. P.,
DALLAS, TEXAS.

Like all subjects in which rapid progress is being made, the dietary treatment of diabetes mellitus is in the throes of controversy between those who adhere to different methods of feeding. It is the purpose of this brief paper to call attention to the principles that underlie our present practices, and to present a method of calculating the dietary constituents that has proven useful.

The past decade has witnessed a complete change in our understanding of the nature of this disease and hence in the method of managing it. Perhaps the status of the treatment of diabetes prior to 1914, can best be presented by quoting from an address delivered at the Johns Hopkins Hospital in 1918, by Dr. Joslin, in which the author said:

"At the beginning of 1914, the outlook for diabetic patients was depressing. The statistics of the Massachusetts General Hospital showed that, in the preceding sixteen years, for each 100 diabetics admitted 28 were discharged dead, a record which duplicated the experience of the hospital between 1924 and 1898. Physicians dreaded to place their patients in an institution lest the treatment there prescribed prove more disastrous than that adopted by the patient's fancy. Surgeons dodged the diabetic, while the obstetrician was out and out afraid of diabetes and urged pregnant women to have abortions. The neurologist, dermatologist and ophthalmologist would throw up their hands at complications within their spheres and exclaim, 'Cure the diabetes and then we will help the patient.'"

In 1914, Frederick M. Allen introduced prolonged fasting and undernutrition as routine measures in the treatment of diabetes. The fundamental idea was, that if the injured pancreas could not function adequately with the body at normal or excess weight, by undernutrition the mass of the body could be so reduced that the pancreas would be adequate. As Dr. Joslin has expressed it, "At some point which will allow of *existence,* the curve of falling weight will cross the curve of carbohydrate tolerance." The results were nothing less than revolutionary. It is estimated that from two to five years were added to the life of the average diabetic by this method of treatment, but they were often years of semi-invalidism, the result of inanition. The latter is to be avoided, but the principle of a reduced caloric intake is of importance. The obese diabetic should be reduced. In the more severe cases it is felt advisable to allow the patients to gain up to within from 10 to

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 1, 1924.

15 per cent of the average weight for their height and age.

More recently, certain other conceptions of the disease and of the metabolic defect present in it, have exerted a very great influence on the treatment of diabetes. Woodyatt has especially called attention to the usefulness of a maintenance diet, i. e., one that meets the basal metabolic requirements during the period of getting the patient free from sugar. During fasting, as has been adequately proven, the body will generate energy from its own tissues to the extent of 29 or 30 calories per kilogram of body weight. Therefore, it would seem unwise and unnecessary to supply the body with less food energy than it can derive from its own tissue.

The same observer has also stressed the advantage of thinking of the diet, not in terms of carbohydrate, protein and fat, but in terms of what they become in the metabolism, namely, fatty acids and glucose. For it is these end-products that are actually utilized. The total amount of glucose that may be derived from them is the burden that the injured pancreas must bear. All of the carbohydrates of the diet or of the tissues may be said to be converted into glucose. Fats are broken up into fatty acids and glycerol in the proportions of 90 and 10 per cent. The latter is capable of conversion into glucose in the body, almost gram for gram. Protein, whether of the diet or tissues, yields aminoacids, and the latter, after being deaminized and oxidized, yield products that are capable of conversion into glucose and *B*-hydroxy and acetoacetic acids. Lusk has shown that approximately 58 grams of glucose and 46 grams of fatty acid, may be derived from 100 grams of protein.

It is evident that a mixture of carbohydrate, protein and fat introduced into the metabolism yields the following:

100 gm. carbohydrate yields in the body, 100 gm. glucose and 0 gm. fatty acid.

100 gm. protein yields in the body, 58 gm. glucose and 46 gm. fatty acid.

100 gm. fat yields in the body, 10 gm. glucose and 90 gm. fatty acid.

The observation that the end-products of the metabolism of a mixture of carbohydrate, protein and fat occur in definite amounts and proportions, has given rise to another conception of importance in the arrangement of the diabetic diet, namely, the balancing of the ketogenic and antiketogenic elements.

Many years ago Rosenfeld stated, "Fats burn only in the fire of carbohydrates." More recently, P. A. Shaffer has brought experimental and clinical proof of the quantitative proportions of this "burning."

There is for every individual at any given time a definite ratio between the amount of oxidizing glucose in the body and the maximum amount of ketogenic fatty acid that can be oxidized without the appearance of abnormal amounts of acetone bodies. In other words, as Woodyatt has stated it, "The quantity of oxidizing glucose fixes an upper limit to the quantity of ketogenic fatty acid that can be completely oxidized at the same time." This ratio, as determined by Shafer, expressed in grams, would be about 1.5 gm. fatty acid to 1 gm. glucose. For clinical purposes a gross error will not be made if this ratio is approximated.

The protein requirement of the diabetic must be given due attention. This requirement varies with the age, weight and activity of the individual patient, and the condition of the kidneys. Nitrogenous equilibrium must be maintained. It can be done with two-thirds of a gram of protein per kilogram of body weight, provided the requirement for calories is otherwise met. The high specific dynamic action of protein stimulates metabolism, which is undesirable and favors acidosis. As has already been pointed out, protein can lead to the formation of 58 grams of glucose for every 100 grams of protein metabolized. In severe diabetes the protein must be restricted to less than 1 gm. per kilogram of body weight in order to increase carbohydrate and fat metabolism.

How, then, may the principles described above be applied to the clinical management of diabetes? A number of formulae, tables and graphic charts have been prepared by Woodyatt, Wilder, Hannon and Kellogg. The formulae devised by Campbell of Toronto, have proven very useful and have given very satisfactory results in my experience during the last eighteen months, in a series of almost 100 patients. The plan of procedure is to ascertain the normal basal caloric requirement for age, height, weight and sex, and to construct a diet with particular reference to the principles discussed above. The diet is calculated as follows:

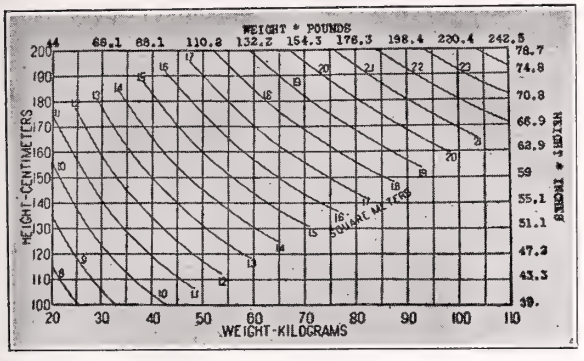
1. The patient is weighed and the height measured. If the weight is found to be greatly in excess of the normal for the patient's height and age, the latter is substituted in the determination of the surface area. In this way obese diabetics are reduced.

2. From DuBois' Surface Area Chart, (Table 1), the surface area of the patient is obtained, and this, when multiplied by the 24-hour basal requirement in calories for the patient's age and sex (Table 2, Aub and DuBois), gives the normal basal caloric requirement for the patient at rest.

3. If the weight is obtained in pounds, Table 1 gives the equivalent in kilograms directly, and this latter figure times two-thirds, gives the number of grams of protein required. (P= 2/3 gm. per kilogram.)

4. The basal caloric requirement (M) divided by 30, minus 1/3 the protein in grams or, more simply, $C=\frac{M-10P}{30}$ gives the number of grams of carbohydrates required.

TABLE I.



BODY SURFACE AREA CHART. (DUBOIS).

TABLE II.

Caloric Requirement per square meter of body surface. (Aub-DuBois.)

	Males		Females	
	Cal. per		Cal. per	
Years	Hour	Day	Hour	Day
10—12	51.5	1236	50	1200
12—14	50	1200	46.5	1116
14—16	46	1104	43	1032
16—18	43	1032	40	960
18—20	41	984	38	912
20—30	39.5	948	37	888
30—40	39.5	948	36.5	876
40—50	38.5	924	36	864
50—60	37.5	900	35	840
60—70	36.5	876	34	816

5. Fat sufficient to make up the calories required is supplied by the formula, F=M/10—P/2.

With the composition of the diet in terms of the weight in grams of protein, fat and carbohydrate required, it is a comparatively easy matter to construct a suitable diet from food tables.

The diet so constructed has a fatty acid-glucose ratio of 1.3 to 1. This allows a few more grams of carbohydrate, and it is thus possible to make the diet more palatable. On such a diet patients become sugar-free, acetone bodies disappear from the urine and there is a gradual fall in the blood sugar level. Patients who cannot remain sugar-free and with a blood-sugar not above 0.13 per cent on this diet, should be given insulin in an amount to keep them so.

These objects having been accomplished, the diet is increased. Usually 6 gms. of carbohydrate in the form of 5 or 10 per cent vegetables, and 20 gms. of fat, are added, yielding 204 calories. Depending upon how well the increase is borne, subsequent additions are made and the protein is increased to one gram per kilogram of body weight.

The importance of maintaining a low blood-sugar level can scarcely be overstated. Hyperglycemia is not a normal condition, and it is a common observation that it predisposes to the development of infection and other complications. It is, therefore, unwise to give a diet of a caloric value very greatly in excess of the patient's tolerance, for tolerance is thus decreased and insulin will not take care of the loss. Joslin says, "With large doses of insulin, the patient is walking on longer stilts and his equilibrium is therefore correspondingly endangered."

When a patient continues to excrete sugar after several days on the original maintenance diet, or on any succeeding diet that is required to maintain health and a fair degree of activity, treatment with insulin is begun.

It has been my custom to start with one or two units, given half an hour before meals, gradually increasing the amount until the urine is sugar-free and the blood sugar is practically normal.

When a diet containing approximately 40 per cent more calories than the basal metabolic requirement, is attained, and an amount of insulin is being given that meets the requirements mentioned, the patient may be discharged or kept under less close observation. It is usually possible to reduce the number of injections of insulin to two a day, before breakfast and before supper, provided the amount required is not too large. The injection of a single daily dose has not proven satisfactory in my experience. The use of insulin does not make unnecessary the most careful attention to the diet; in fact, dieting is more necessary than ever before if the patient is to avoid the dangers of hypoglycemia, and get the full benefit of the insulin injected. Throughout treatment insulin is added to the regular program of dietetic management, and the principles of the diabetic diet are utilized, not replaced.

The subject of the management of diabetes cannot be dismissed without stressing the importance of educating the patient. I try to make them feel that during their hospital stay they are taking a course in diabetes. It is essential that they should know how to test the urine for sugar and diacetic acid, how to calculate the amount of protein, fat and carbohydrate in the diet, and its caloric value. They should also learn the symptoms of developing acidosis and of hypoglycemia, and know how to combat these conditions.

Lastly, they should know how to administer insulin to themselves.

SUMMARY.

The principles upon which the present-day management of diabetes rests, are presented and a plan for applying these principles clinically is outlined.

Attention is called to the importance of a properly balanced diet, whether insulin is used or not.

The necessity of instructing the patient is emphasized.

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ABSTRACT OF DISCUSSION.

Dr. C. T. Stone, Galveston: Insulin has been a great help in controlling severe cases of diabetes, but I think it has given some diabetic patients the impression that where insulin is used dietetic methods are a secondary consideration. This is certainly not the case, as it is more important for one to have a careful diet without insulin than to have no restriction of diet or imperfect restriction of diet, with insulin. The reasons for this are, first, should the individual ingest too little carbohydrate for his insulin dose, hypoglycemia will result, which may assume alarming proportions; second, uncontrolled metabolism allows blood sugar to become very high at other times, with a consequent appearance of sugar in the urine. Hyperglycemia taxes the antidiabetic function of the pancreas, and makes for a steady increase in the severity of the condition, and thirdly, the various complications of diabetes, such as furunculosis, arteriosclerosis and gangrene, are very much more likely to occur in patients imperfectly controlled.

There is another point in the management of this disease which has occasioned a great deal of discussion, the necessity of blood-sugar determination. Some advocate that if the urine remains sugar free it is not necessary to examine the blood-sugar. With that conclusion I cannot agree. It would seem better to do more than simply keep the urine free of sugar; as people who have had the disease for a number of years may develop a very high threshold in the kidney for the passage of glucose, and sugar may not appear in the urine until after the blood-sugar has reached a concentration of .25 per cent. Such a hyperglycemia, even with a sugar-free urine, is a constant menace to the individual who has it, predisposing to infection and other complications, and making for a steadily downward course of the disease.

In regard to the methods of establishing a diabetic dietary, the one outlined by Dr. Carter is quite satisfactory, and certainly the most scientific of those in use at present. Another method, which has, from a practical standpoint, proved itself to be very helpful, is that of rendering the patient sugar-free by a series of test diets, and then establishing carbohydrate tolerance by maintenance diets, as suggested by Dr. Joslin, and then, after the caloric requirements have been determined, allowing for a gram of protein per kilo of body weight. Bearing the carbohydrate tolerance of the patient in mind, it is then an easy matter to fill out a diet up to the desired number of calories, with fats.

If the patient's tolerance for carbohydrates is so low, usually somewhere under 75 grams in 24 hours, it is desirable to control the sugar output with insulin. There is a growing conviction that milder cases of diabetes, namely, those with carbohydrate tolerance above 100, do better under accurate dietetic control than when treated with insulin.

Dr. V. M. Longmire, Temple: In the present day management of diabetes mellitus, there are three cardinal points which should be stressed: first, the diagnosis; second, the diet, and third, insulin. It is always very important to know that we are dealing with a true diabetes and not with some of the glycosurias. This can be fairly accurately determined by study, in most cases, although in a few cases it is rather difficult. The most important feature in the treatment of diabetes mellitus today is the diet, which fact the essayist has stressed. There are several methods in vogue at present, but the one which has been discussed by Dr. Carter is the one which I think is the preferable one and the most practicable. It is essential that the different character of foods, proteins, fats and carbohydrates be in a definite and proper relation to one another. In handling cases of diabetes mellitus I have arbitrarily followed this rule in those cases which require medication. An individual who will metabolize not more than 60 grams of carbohydrates should have insulin; in one that will metabolize from 60 to 85 grams it is optional, and one who metabolizes above 85 grams I do not think should have it unless for economical reasons.

Dr. Carter, (closing): The stressing of diagnosis by Dr. Longmire is timely. All of us see patients with glycosuria who do not have diabetes. The diagnosis then is of first importance, as the management of the two is entirely different. The use if insulin has begun to settle down to the right level. It is generally agreed that there are a number of patients who get along well without insulin. The use of the formulae I presented is not a difficult procedure, but will enable one to compute the necessary diet with ease. The best management of diabetic coma is to prevent it. When acidosis is suspected by the patient, he should know enough about the disease to go to bed, take an enema, omit all fats, take warm fluids and then call the doctor. These measures will prevent coma. These same things should be done after coma develops, but of course here the result of the use of insulin is very striking. The use of alkalies has about become obsolete. I do not believe in purgation in diabetic coma.

Cholagogues.—As early as 1868, a British committee appointed to investigate the subject arrived at the conclusion that mild mercurous chlorid (calomel), mercuric chlorid and taraxacum—all reputed cholagogues—do not increase the flow of bile but probably act on the bile-expelling apparatus. Recently, the latest experimental procedure was applied to judge the status of a number of substances that have at various times been alleged to influence bile flow. With the exception of bile salts, negative results only were obtained with such substances as calomel and salicylates. All dependable evidence warrants the recommendation that clinicians consider the advisability of abandoning therapeutic efforts to "stimulate" the liver through the use of substances having alleged cholagogic effects.—*Jour. A. M. A.*, June 7, 1924.

PROBLEMS CONFRONTING THE PHYSICIAN IN THE DIAGNOSIS OF MALNUTRITION.*

BY

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Nutrition is the sum of the processes concerned in the growth, maintenance and repair of the living body as a whole or any of its constituent organs.[1] Concerned in this process there are two forces constantly opposing each other, anabolism, which is a chemical synthesis of food into available living tissue, heat and potential energy, and katabolism, which consists of analytical changes of body substance into simple elements.

Food consists of protein, carbohydrate, fat, salt, water and vitamines. The proteins are very complex molecules, containing in varying combinations, nitrogen, carbon, hydrogen and oxygen. They also have traces of phosphorus and sulphur. Fats are hydrocarbons, and carbohydrates are polysaccharides. Neither contains any nitrogen.

The chief function of protein is to provide tissue, while the fats and carbohydrates furnish heat and energy. Salts by their osmotic power transport water, and thus maintain equilibrium between the fluid and tissues. Water functions as a carrier. Just how vitamines act is not known, but their presence is necessary, as evidenced in their absence in the diet by the occurrence of such diseases as beri-beri, pellagra, rickets and scurvy. The proportion of carbohydrate, protein and fat, consumed by the average individual, parallels to a varying degree that of the body, but the food molecules are not of the same chemical composition, and so they must first be broken down by the process of digestion, then synthesized by a more or less complex process into body tissue. The body is continuously at work, which liberates heat and consumes energy. Any nitrogen consumed is from "lifeless protein[2]" furnished to the cells by the blood. Even during excessive work, very little protein is used. The energy obtained is from the consumption of fat and carbohydrate.

Adults maintain a nitrogen equilibrium; that is, as much protein is consumed as is eliminated. The same is true of carbohydrate, fat, salt and water. A part of the food is used to replace living tissue lost in wear and tear, another for reserve work, and still an additional amount to supply heat and energy. But children need an increment for growth. So they must assimilate enough food to give them a positive balance; more food must be synthesized than is eliminated. Overwork or impaired assimilation, reduces the growth increment. Growth will occur even if there is inadequate good, but at the expense of the vital reserve. If the growth factor is not obtained, then the tissues are impoverished. This is the same condition as occurs in starvation.

Starvation is defined as the deprivation of an organism of any or all of the elements necessary to its nutrition.[3] Studies made on adults and animals during starvation may give us some idea of the conditions that exist in malnutrition. There is a loss of body substance, the greatest percentage being from the body fat and the next from the glands, while the organs least affected are those necessary for the maintenance of life—namely, the heart and nervous system.[4] It would seem that the food is taken from the one to support the other. The activity of the glands is greatly reduced. Since it is stated[5] that the appetite is not an expression of general cellular hunger, but rather the result of a local condition in the gastro-intestinal canal, an explanation is suggested for the poor appetite seen in undernourished children. In an effort of the body to conserve the vital organs, nourishment is furnished them at the expense of the glands. This results in a diminished secretion of the digestive juices and thus the normal stimulus to take food is lost.

There are many other problems in the diagnosis of malnutrition. Its cause must be determined and the factors discovered that prevent recovery. Diagnosis, then, is an essential part of treatment.

Body weight is an index of the balance existing between good assimilation and elimination, by which any disturbance of metabolism becomes apparent. Other factors remaining constant, weight increases with added assimilation or diminished elimination, while a loss is noted from less intake or more excretion. The effect of weight loss is shown by a decreased ability to do work, both physically and mentally, and by an increased susceptibility to disease. In other words, there is less vitality. Malnutrition is not a disease but a state, resulting from influences which prevent the patient from living a normal life, and resulting in underweight and lowered vitality—or, as Dr. Geo. D. Newman[6] expresses it, "a lowered condition of health and body substance."

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

1. Lusk: "Science of Nutrition," p. 69.
2. Voit: "Handbuch der Ernahrung," 1881, p. 300.
3. Lusk: "Science of Nutrition," p. 69.
4. Kumagawa: "Aus den Mittheil d. med. Fakultat der Kais. Japan Univ.," Tokio, 1894, iii, 11.
5. Lusk: "Science of Nutrition," p. 107.
6. Newman, George: "Annual Report of the Chief Medical Officer, Board of Education (England and Wales)," 1915-16, p. 32.

There are many children who weigh less than normal but are healthy and robust. They do not suffer from malnutrition. Others weigh more than normal, but show the ill effects of malnutrition. The comparative weight alone then is not an accepted standard, but it will furnish an index to nutrition. Many tables of normal weights and heights are available, but the one prepared by Dr. Bird T. Baldwin[7] seems to best meet the present requirements.

A child as much as seven per cent less than normal, is usually considered underweight. The signs of malnutrition are of more importance than weight, and they must be considered in every individual. They can best be given after describing a normal child. It measures up to the standards for age, race and family characteristics. The expression is pleasant; the eyes are bright; the skin is moist, warm and pink; the hair is glossy; the tongue is clean; the muscles are firm; the limbs are rounded, with a moderate amount of fat; the hearing is good; the lips are closed; the thorax is capacious; the ribs are not seen; the scapulae are not angular; the abdomen is flat; the appetite is good; the sleep is sound; the breath is odorless; the posture is erect; the gait is elastic; the disposition is happy, and there is an active, healthy interest in the surroundings and an absence of fatigue in normal play.

The undernourished child, on the other hand, lacks many or all of these characteristics. The stature may be small; the posture is stooping. There is a lack of interest in his surroundings, or a nervous activity, termed by mothers as "wirey." The eyes may be dull and sunken, with dark circles beneath. The mucous membranes are pale; the skin is dry and cold; the hair is lusterless and standing on ends; the tongue is coated and the breath foul; the muscles are flabby and stringy; the bones show beneath the skin; the neck is small and the face lean, causing the chin to look sharp. The scapulae are winged and the abdomen protrudes; the appetite is poor; the child tires easily, which causes it to be irritable, particularly in the afternoon.

This is the potential condition that contributes most to the mortality of children. Such a child is unable to attend to any duties regularly, oftentimes dropping out of school altogether before completing high school, and he becomes the runt or invalid of adolescence. There are but few children who are inherently malnourished. Heredity will influence the stature, but many small children are perfectly healthy. Small parents produce children of usual size if an opportunity is afforded for normal development. On the other hand, malnutrition is as often encountered in the progeny of large as it is in those of small people. It is a fact that malnutrition in early life produces stunted adults. Since from thirty to fifty per cent of children are malnourished, is it not reasonable to presume that most of our small adults are not born to this state, but have just been neglected during childhood? The biggest problem is often that of convincing the parents that a child is not born "skinny."

A malnourished child who presents a history of difficulty in surviving the early years of life, caused by impaired nutrition occasioned by such conditions as prematurity, chronic intestinal indigestion and athrepsia existing at birth, presents the most serious problem. After years of effort they may show only a slight gain.

Mental defectiveness is a handicap that is hard to overcome, because no coöperation can be secured. This state may be associated with an endocrine disturbance. Such constitutional diseases as tuberculosis, syphilis, nephritis, or chronic cardiac disease may determine the management of the individual case. Diseases of the respiratory tract, such as diseased tonsils and adenoids, or granular pharynx, are found to cause malnutrition more often than any other. Deformities which hinder normal aeration of the blood, are the most serious and must be corrected. Some that may be mentioned are stricture of the nose, kyphosis, and contracture of the chest, the result of advanced rickets and postural defects, such as scoliosis and weak-foot.

Not only should diseases and deformities be considered, but the physician must be particularly concerned with the environment and habits of the child. These influences enter into every case and may determine the child's recovery from malnutrition. They may be termed the physical restraints of growth. Unfavorable influences in the home cause a bad effect. A nagging mother or an irritable father, will keep a child in constant dread. An atmosphere of turmoil and strife is attended by worry and fear, which impair the appetite and prevent sleep. The success of any regime depends upon the coöperation of the parents and the child. Often the aid of the school teacher must be enlisted. This cannot be done until those in charge are convinced of the danger of neglect, and the advantage derived from good health. So the mental attitude of those in charge of the child must be determined. Consider if they will accept a new schedule for the household, and if enough discipline may be exercised to enforce regulation.

7. Baldwin, Bird T., and Wood, Thomas D.: "Weight-Height-Age Tables," Supplement to Mother and Child, July, 1923.

Is the child rceeiving sufficient sleep? The amount required varies, but twelve hours is essential for children up to ten years, and eleven hours for those who are older. It is well to remember that even though put to bed at the proper time, a child may not have sufficient sleep. It should be ascertained if the sleep is restful, or if the child awakes during the night and cries out.

The present school curriculum consumes for study and play, most of the day. It is evident that one cannot take music and dancing, attend parties and engage in the many other activities that the modern parent forces upon the modern child, and have sufficient time left for rest. These extra duties are as injurious as is forced labor. Yet no child labor law protects children from overzealous mothers.

It is not possible to discuss all of the dietary factors productive of malnutrition. In every case they are a contributing factor and may be the only one. Brevity allows the mention of only a few of them. Is the diet balanced, that is, does it contain the proper amounts of protein, carbohydrate, fat, salt, water and vitamines, represented by milk, bread, butter or vegetable oils, fruit, starchy and green vegetables, cereals and meat? These may be present in the dietary in proper amounts but not consumed because of poor appetite, resulting from giving food between meals or at irregular hours, or because of improper eating habits, such as dawdling with or gulping the food.

Too much food is as harmful as too little. Malnourished children may be divided into two groups—the habitually stuffed and the starved. One should not force a child to eat when it is not hungry, unless freedom from indigestion can be assured. On the other hand, the child who has always had a poor appetite, the result of malnutrition, should be required to eat the amount of food necessary. The giving of indigestible articles, such as greasy or fried foods, pastry, nuts, candy, fresh bread, sausages, ice cream or raw fruit, may explain a poor appetite.

Over-crowding, insufficient ventilation, high temperature or chilling, may be responsible for many cases of malnutrition. The kind of clothes worn may be to blame. Evaporation and radiation from the skin must not be interfered with. A child that is shaking from cold caused by exposure of the neck or extremities, will not gain weight.

The information needed to establish a diagnosis, is gained only after a most thorough history has been taken, and a painstaking examination made. This cannot be obtained from a casual inspection. The responsibility for dispelling the prevalent idea that malnutrition is of no significance, belongs to the doctor.

SUMMARY.

When a child is deprived of sufficient growth factors, the vital reserve is diminished, protein is conserved at the expense of fat and glycogen, and there is diminished function of the organs. The effects of malnutrition may be compared to chronic starvation.

Poor appetite results from an effort of the body to nourish the most essential organs. The secretory juices are diminished and the normal stimulus to take food is lost.

In the diagnosis of malnutrition, the physical signs, weight and health of the individual, must be considered.

Diagnosis is concerned with the causes of malnutrition. They are, disease, physical restraint, poor home environment and bad health habits.

ABSTRACT OF DISCUSSION.

Miss Edith Burns, Austin: We are interested in seeing these children, in finding defects and in having preventive measures instituted in their homes. We weigh and measure these children, and say in a note that loss of weight is probably due to malnutrition. The tables we have serve only as an index. We feel that these children should be carefully examined, and this is certainly the doctor's responsibility. Too often when parents take their children to the doctor, a tonic is given and the doctor says, "Don't worry, everything will be all right." Later, some acute disease attacks such children.

In order to have health we must have vitality. If there is any deviation in the normal growth of a child, we should make every attemot to establish normal nutrition. Instructions as to diet and hygiene should be written down for the parents, if we expect them to be followed. There is no standard set in Texas for a uniform health program. It is your responsibility as physicians to establish such a standard. We do not want to wait until pathological conditions are absolutely evident; we want to create health. We urge your interest in this movement.

Dr. Joe Dildy, Brownwood: There has been a general impression that malnutrition is due to poverty. I do not believe this is always the case. We see it both in the rich and the poor. I have seen children injured by too much cane sugar, cold drinks and eating between meals. Another thing that is injurious is for children to hurry out to play following a meal. In an experiment on dogs, which were made to play while eating, it was found that metabolism was reduced 50 per cent. School children do this very thing at the lunch hour. Everything possible should be done to have school children eat properly.

At a pediatric society meeting in the North, rickets was being discussed as a result of poverty, and a doctor from South Texas got up and said he had never seen a Mexican child with rickets, and few children are more poverty stricken than these. The doctor impressed upon them the importance of sunlight as a preventive measure against rickets. There is ample opportunity for the education of the public along these lines, and extension work of this character should be encouraged throughout the State.

Dr. Perkins (closing): The chief factor confronting the physician in this work is early attention to those children who are malnourished. Such children can be given instructive programs, and be better informed on how to live properly.

MODERN PRENATAL MANAGEMENT.*

BY

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WICHITA FALLS, TEXAS.

Pre- or antenatal management has as its ultimate objective the influencing of the health of the offspring beneficially, by surrounding the mother with proper conditions during pregnancy. This implies the care and guidance of the prospective mother, thereby safeguarding her health during gestation. The fact that approximately 20,000 women die annually in the United States as a result of pregnancy and labor, and that there are 150,000 full-term still-births, constitutes a sad commentary upon the care of the mother during pregnancy. About 20 per cent of these deaths are due to the toxemias of pregnancy; and it is logical to believe that proper prenatal care would greatly reduce these figures.

In view of these appalling conditions, it would seem advisable to consider each pregnant woman potentially abnormal until careful examination and observation during pregnancy prove her normal. The object of this paper is to emphasize the importance and value of thorough physical and obstetrical antepartum examinations, in order to reveal conditions amenable to corrective or curative treatment. A complete physical examination should be made routinely, *early in pregnancy.* Frequently, much practical information can be obtained from the history of the case. The family history should cover particularly tuberculosis, apoplexy, Bright's disease, cancer and the character of labor experienced by the patient's mother and sisters. In the personal history the most important factors are previous pregnancies, abortions, myocardial deficiency and previous infections, such as influenza, scarlet fever or measles, if complicated by nephritis or tuberculosis. The history of previous abortions or still-births, requires the exclusion of syphilis and nephritis. E. P. Davis states that spirochetes are present in 60 per cent of all macerated fetuses, and Royston advises a routine Wassermann. The therapeutic test has often resulted in the full term delivery of women subject to habitual abortion. In every organic heart disease in pregnancy, the physical activities will have to be restricted to the required degree. Arrested cases of tuberculosis should be closely observed, with insistence upon proper rest and diet.

Previous history of infections should give a clue to the presence of foci of infection in teeth, tonsils, sinuses, appendix, gall bladder, etc., and these should be treated accordingly. LaVake believes that infected teeth and tonsils, influenza and sinusitis, are a possible cause of nephritis in pregnancy, of preeclamptic toxemias and eclampsia. Talbot states that infected teeth harbor foci more commonly than the tonsils, and they should be removed. In view of the dangers of septic foci and the development of toxemia of pregnancy, it would seem advisable to have *x*-ray examinations made of all the teeth, as a routine procedure. Rowley recommends the early removal of dental foci as a part of every prenatal regime.

I am usually consulted by these maternity patients after they have missed one full period. This is especially desirable in primiparous women, because the temperament and attitude of the patient may be studied and the anxiety that so many women have toward labor may be removed. The assurance of normal results will do much to prevent the variations from normal and prevent the neurotic type of vomiting so frequently encountered. Early detection of gonorrhea and syphilis, enables one to institute rigorous treatment.

A booklet on the hygiene of pregnancy should be given each patient. Directions as to diet, exercise, bowel movements, clothing, sexual intercourse, breasts, urine, skin, sleep, amusements, etc., should be given. A warning against the indiscriminate use of drugs might be included, on account of the danger of miscarriage. In our locality, calomel and quinine are household remedies. Quinine is especially contraindicated, as it may induce uterine contractions.

In the first three months of pregnancy the diet should be carefully regulated. Thus it may be possible to prevent miscarriage, which it is thought occurs more frequently when there has been a calcium deficiency. Thus morning sickness and indigestion may be lessened, and weight maintained. Recent observations by Krebs and Diekman, at the Washington University School of Medicine, seem to indicate that depletion of carbohydrates, and dehydration, are the most important underlying factors in the production of toxic (pernicious) vomiting, which may start as a simple morning sickness, the only difference being a question of degree or intensity. These investigators have treated the condition quite successfully, and without therapeutic abortion, in a limited series of cases. More recently, other investigators are attempting

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, April 30, 1924.

to increase the sugar tolerance by giving a combination treatment of insulin and glucose. In the middle three months of pregnancy the diet should be regulated to maintain the necessary calcium intake. In the last three months of pregnancy, the diet should be so controlled as to prevent too rapid increase in weight.

To cover all of these requirements, there should be a mixed diet, and bulky enough to aid in elimination. It should contain milk in some form, cereals in excess, vegetables daily, fresh fruit, meat, fish, eggs and fat in moderation. A very important consideration is the question of increased weight. Marked increase in weight is often the earliest danger signal of eclampsia, which can be prevented by limiting proteins, increasing elimination and not allowing obesity. Statistics show that a state of good nutrition in the mother at the time of labor, increases the average weight of full-term babies, while a poor state of nutrition increases the percentage of stillbirths and post-natal infant mortality. Other conditions which will require dietary supervision are, tuberculosis, heart disease, diabetes and toxemias from any acute infections which may intervene.

Exercise should be taken out of doors; walking is the best, stopping short of fatigue. Active exercise is better than dieting in avoiding postmaturity. Violent exercise, such as lifting, shopping, sweeping, machine sewing, golf, tennis and swimming, are to be avoided.

The patient's bowels must move every day; the patient preferably going to the toilet every morning at the same hour. Mild laxatives are prescribed if necessary.

The clothing should be loose, and suspended from the shoulders and nothing tight worn about the waist. The corset should be discarded after the third month unless advised otherwise. During the last two months if the abdomen becomes pendulous or uncomfortable, a maternity corset may be worn. Circular garters are prohibited, on account of the tendency toward varicosities. The wearing of low, square-heeled shoes should be insisted upon. This will eliminate a fairly common and at times distressing backache, expressed by pains in the back, thighs and legs. Grassman reports 700 patients with weak feet, in whom the pain was referable, not to the feet, but to the back and thighs only.

The best method of avoiding breast troubles is to have the breasts well prepared during pregnancy. At least two months before the expected confinement the patient should be instructed to wash the breasts and nipples vigorously with a small hand brush, soap and cold water, followed by a solution containing two parts alcohol and one part water, applied by a cotton swab. Under this treatment the nipples become less sensitive. They can then be massaged with some softening ointment, such as a 50 per cent mixture of lanolin and cold cream, stretching the skin over the breasts and abdomen with the finger tips, pulling in opposite directions.

The examination of the urine should be made monthly, and during the last trimester, every two weeks. Besides the routine examination for albumen and sugar, one must include a microscopic examination, for casts, pus and bacteria. Also, a record of the twenty-four-hour output of urine should be kept. Royston reports that a diminished twenty-four-hour output of urine has preceded the convulsion in every one of his eclamptic cases.

The frequency of pyelitis in pregnancy has given us the term "pyelitis of pregnancy." The diagnosis is usually overlooked unless microscopic urine examinations are made, and its importance cannot be overestimated. Mayer states that pregnancy is interrupted prematurely in one-third of the cases complicated by pyelitis. It also exposes the mother to the danger of renal insufficiency and of septicemia.

Sleep is doubly important during pregnancy, from eight to ten hours at night being necessary and in addition, a nap or resting time of two hours duration the day.

As to amusements, I quote from the booklet, which I give to each of my pregnant patients: "Associate with young and agreeable companions, avoiding all who discuss 'the awful time Mrs. Smith had when her baby came,' etc. No shock can 'mark' an unborn baby; no horrible sight can deform him, but worry, fear and anger on your part might impair the nutrition of the baby. Therefore, strive to remain always calm, happy and even-tempered. Go to whatever amusements you desire, from the beginning of your pregnancy. No one can possibly detect the state from your figure until after the third month."

The sensation of quickening is described to the patient as a sensation in the abdomen somewhat similar to that of a bird fluttering in the hand. The date of quickening should be reported as soon as felt. A final injunction should be given to report at once any of the following symptoms observed at any time during pregnancy: (1) Scanty urine; (2) persistent headache; (3) flashes before the eyes; (4) swelling of the hands and feet; (5) bleeding, and (6) pain. In the early months bleeding warns of miscarriage, which can usually be prevented by quick treatment.

The coagulation or bleeding time should be taken where there is a tendency to hemorrhage following minor injuries, or where there are numerous ruptured capillary dilatations. A diagnosis of placenta previa should call for blood grouping, so that blood transfusion can be performed, if needed, following delivery.

Pain, or whenever the patient feels that anything is not as it should be, may mean impending abortion, extra-uterine pregnancy (ablatio placenta) disease or misplacement of the uterus, pyelitis or appendicitis. The effects of pressure, such as swelling of the lower limbs, varicose veins or hemorrhoids, may be slight enough to be mere discomforts, but they, too, may be serious, and they require amelioration.

The patient should report at the office every month, as long as convenient. When this is impossible, she should be visited at her home. At each monthly visit the weight, temperature and blood pressure are recorded, and the urine examined. My observations have shown blood pressure readings a more reliable indicator than the presence of albumen in preeclampsia. A blood pressure persistently above 130, systolic, and below 150, is an indication for more rest, more active elimination, increased fluids and a restricted, nonprotein diet. A systolic pressure of 150 demands absolute bed rest, stricter diet and daily determinations of the urine and blood pressure. If the blood pressure continues to rise, the induction of labor is to be considered. A blood pressure which is increasing is particularly significant. The gain is the result rather than the cause of toxemia, and merely indicates that the patient is "waterlogged."

From the fifth month, fetal heart sounds are located and the rate recorded. This is important in case of death of the fetus in utero. When any abnormality is suspected, diagnosis may be substantiated by x-ray examination. Stein and Arrens have recently reported 400 cases in which the fetal skeleton has been demonstrable with regularity after the fifth month. I am reporting a case of anencephalic monster, diagnosed by x-ray examination. As far as I am able to ascertain, this is the third case reported in medical literature. It is my opinion that roentgenography will become common in the determination of presentation and of fetal abnormality.

Davis states that the normal gain in weight for pregnancy, provided the patient's weight was within normal limits before, should not exceed twenty pounds. If previously underweight, a gain of thirty pounds may be allowed. He reports cases showing excessive gain and the attending dangers, albuminuria and eclampsia. The weight of the fetus at term depends to some extent on the food intake of the mother. Prochowink, in 1889, proposed a diet poor in liquids and carbohydrates and rich in proteins, with which he was able to control the fat growth of the fetus, preventing obese, flabby infants. The question of controlling this excess adipose in the offspring is holding the attention of the obstetrician in its relation to postmaturity, in that the overdeveloped fetus may be a predisposing factor in prolonging the period of gestation.

Statistics show that a marked difficulty is encountered in the delivery of large babies, with a higher percentage of injury to the mother and a higher mortality among infants. It has been my experience in a limited number of cases, that when dietary restrictions have been carried out by the mother, smaller babies are delivered at term, and that larger babies are post-mature, as estimated by the McDonald method. He measured the height of the uterus and found that when the top of the fundus is 35 cm. above the symphysis pubis the fetus is supposed to have reached maturity, weighing approximately 3300 grams. For every cm. above or below 35 cm., there will be a variation of 200 grams in the weight of the fetus. McDonald also states that the height of the uterus in centimeters, divided by 3.5, will give the period of gestation in lunar months.

With this technique we have a valuable aid in determining maturity, if the induction of labor is contemplated. Dependence cannot always be placed on the menstrual history or the date of quickening. Reed has pointed out the importance of mensuration in utero in determining the maturity or the postmaturity of the fetus, and the indication for the induction of labor. The length of the child is determined by Ahlfield's method of measuring the actual length of the long axis of the fetus in utero, by means of the pelvimeter, one end of the calipers resting against the upper border of the symphysis at the site of the clitoris and the other against the upper border of the fundus of the uterus. From this measurement deduct two centimeters for the thickness of the abdominal wall, and multiply by two. The result is an estimate of the actual length of the fetus at maturity—48 to 52 cm.

Perret measured the occipito-frontal diameter in utero, and estimated the biparietal by deductions based on averages studied from similar measurements on the living child. These measurements are begun from 6 to 8 weeks before the expected date of confinement, and linked with the menstrual his-

tory and date of quickening they are of great value in estimating the size of the fetus and comparing it with the period of gestation.

Measurements of the external bony pelvis of the mother, are usually recorded at the first examination. Not later than the eighth month, a final vaginal examination is made, to determine the position of the uterus, the presence or absence of pelvic tumors or contracted pelvis, and internal pelvic measurements are noted. In view of the fact that most obstructions to the advance of the presenting part occur at the pelvic inlet, the shortened antero-posterior diameter of the inlet is the most important measurement of the pelvic cavity. If the middle finger of the examining hand reaches the center of the sacral promontory easily, or can palpate more than the lower three sacral vertebrae, or can palpate the entire linea-terminalis, there is a small pelvic cavity.

Retro-displacement of the pregnant uterus is fairly common, but usually corrects itself spontaneously as pregnancy advances. Obstinate cases usually yield readily to gentle pressure in the vaginal fornix by means of a Voorhees bag containing five pounds of mercury, with the patient in the Trendelenburg position, for from five to twenty minutes. This mercury bag method is practiced at Barnes Hospital, St. Louis, and is the safest and one of the most effective of all measures for replacing the retrodisplaced pregnant uterus.

CONCLUSIONS.

1. If prenatal care does nothing but control toxemias of pregnancy, it gives the obstetrician a fighting chance to increase the birth rate of living children thirty thousand per year.

2. The modern obstetrician does not consider that his duty begins at the end of pregnancy. He is in possession of something besides faultless forceps technique and perfect bed room manners.

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TREATMENT OF FRACTURE OF THE NECK OF THE FEMUR.*

BY

BEN L. SCHOOLFIELD, M. D.,
DALLAS, TEXAS.

It is proposed in this paper to outline a rational method of treatment for fracture of the neck of the femur—a disability regarded, in some quarters, as more or less hopeless and incurable, more especially because it so commonly occurs in a class of patients that would certainly not be selected as ideal surgical risks. I refer to the aged. It seems that the treatment of this condition, though worked out several years ago, is not generally understood, if one is to judge from the number of nonunions which take place, or from the methods of treatment still outlined

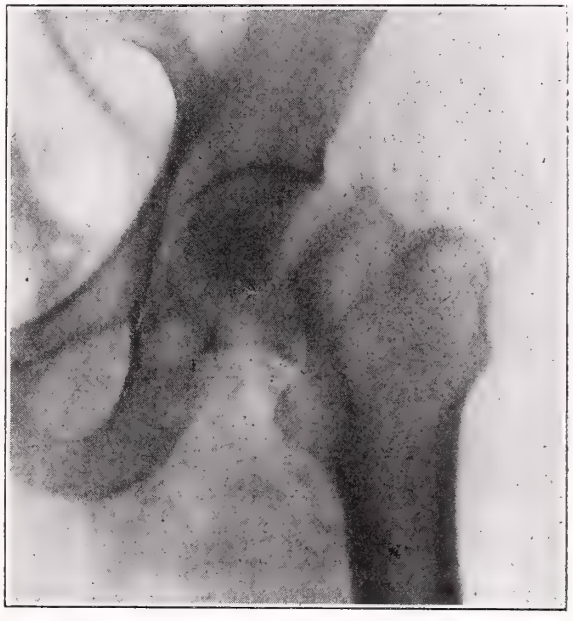

FIG. 1. Fracture of neck femur, left. Patient, female, aged 83 years. Radiogram taken December 7, 1923.

in some of the text-books on surgery. I feel justified, therefore, in presenting this subject.

Some writers have classified this fracture into two varieties, according to the anatomical location of the fracture, the intracapsular and the extracapsular. Cunningham's Anatomy, however, states that only the posterior part of the outer third of the neck of the femur is extracapsular; hence a fracture in this vicinity must be partly extracapsular and partly intracapsular, and to classify them thus would seem more confusing than otherwise. For purposes of treatment, a fracture of the neck is a fracture of the neck—no more and no less. It does ap-

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pear, however, that those fractures taking place near the base of the neck, tend to unite more strongly than those taking place near the head of the bone. This is on account of the better circulation and wider apposing surfaces of cancellous bone.

Much has been said on the subject of impaction in fracture of the neck of the femur, and we are warned not to disturb such impactions. There is no doubt but that this subject has been given far too much promi-

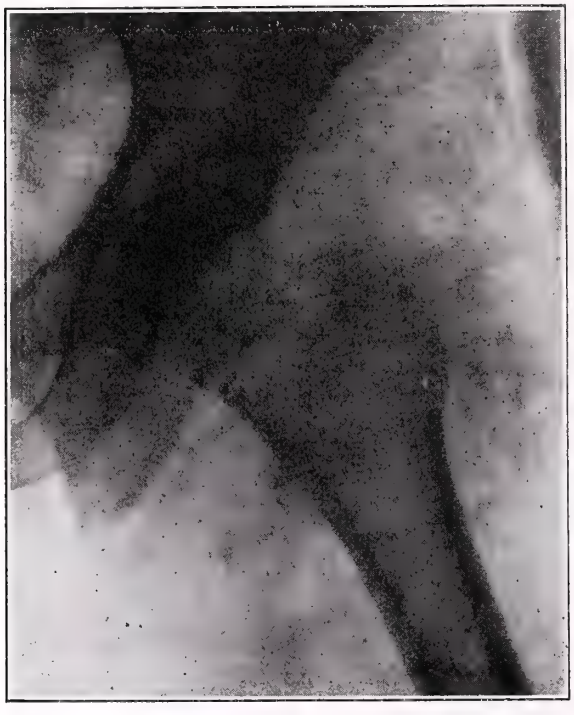

FIG. 2. Same case as Fig. 1. Reduction of fracture under ether anesthesia, December 9, 1923. Radiogram taken next day (through plaster spica) shows excellent alignment of fragments.

nence. We should never hesitate to break up an impaction, if it results in a bad position for the limb.

I shall not take up much time on the subject of diagnosis. A few points worth noting are, the loss of the power to walk or stand, the external rotation of the limb, and the inability of the patient to raise the limb from the bed by voluntary effort, when lying on the back. It is superfluous to insist upon the value of the x-ray examination, both before and after the reduction. It is now quite generally understood that scientific bone work cannot be done successfully without the aid of this more exact method of checking up the diagnosis and treatment.

The treatment which has shown the best results is the abduction method. There are several ways by which this treatment may be carried out, other than the one to be described. These are, the traction method of Maxwell-Ruth, the abduction frame of General Sir Robert Jones, and the abduction hip-brace of Dr. Bradford. The abduction treatment of Dr. Royal Whitman is now pretty well recognized as the more generally applicable, for the reason that it requires no special apparatus, which might not always be available. The other methods have, doubtless, given good results in skilled hands, but the Whitman method has the advantage of simplicity, universal availability, and of the fact that the patient may be changed in posture in bed, or may be carried out in the open air and sunshine if the weather is suitable.

It is true that a certain number of patients will get well without any treatment, as was recently shown by Dr. Ridlon, but such procedure, with all the hazards that it entails, has little to recommend it.

The Whitman treatment consists in placing the patient upon a pelvic support, to which should be attached a perineal bar. The Hawley table is ideal for this purpose. Under anesthesia, traction is then put upon

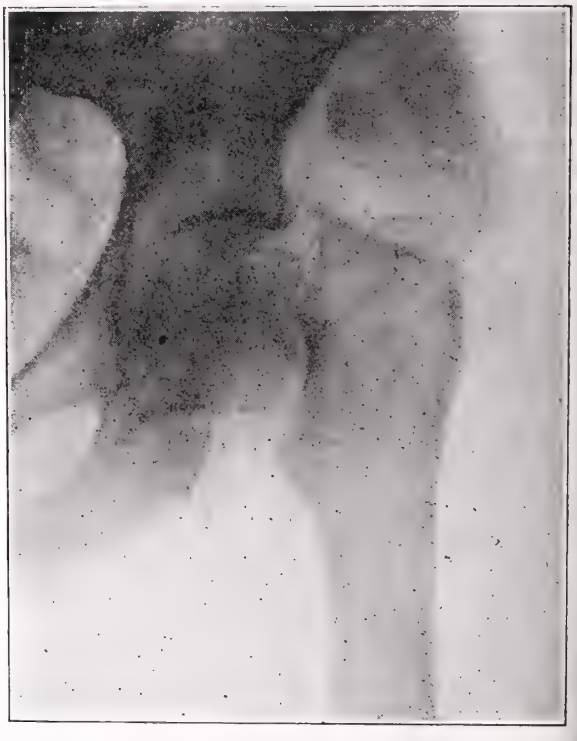

FIG. 3. Fracture of neck of femur, left. Patient, female, aged 64 years. Reduced September 24, 1923, under ether anesthesia.

the limb until the shortening has been overcome. Traction is at the same time applied to the sound limb, to balance the pelvis. The limbs are then carried out to the full limit of normal abduction in the extended position, and slight internal rotation is secured. In this attitude, a long plaster-of-Paris spica is

applied from the tips of the toes to the axillae. I want to insist upon the proper application of this spica, as much of the efficacy of the treatment and the comfort of the patient, are dependent upon this important factor. It should be snug-fitting, strong and firm. Bony prominences should be well protected and the spica should be so trimmed that the important functions of urination and defecation may be carried out without embarrassment.

As soon as the patient has sufficiently recovered from the anesthetic, the head of the bed should be elevated a foot or so. This renders the patient more comfortable, and reduces the liability of hypostatic congestion. It also favors union. Another important factor in the prevention of hypostatic congestion and pneumonia, is the frequent change in posture of the patient. This change should be made every four to six hours, from the position of lying on the back to the face, and *vice versa*. Frequent change of posture also lessens the liability to the development of bed sores. A board placed underneath the bed springs, directly across beneath the hips, is useful in preventing sagging of the bed.

As soon as union has taken place, the patient may be allowed to be up, wearing a short plaster spica to the knee and using crutches. Some sort of support will be necessary for some months, more especially in very elderly subjects.

Whitman says of the abduction method, that it "is adequate because it utilizes the anatomy of the hip joint to correct the deformity and to appose displaced fragments, external appliances being entirely subsidiary to the internal, or natural splinting." He emphasizes the fact that "tension on the capsule assures alinement of the fragments, and forces a resistant contact" when full abduction is reached. This method of treatment will insure union and good function in the majority of cases, and extremely few pneumonias should develop.

Nonunion should seldom occur under favorable conditions, and its treatment will depend upon whether or not the neck has been absorbed. If not absorbed—and Campbell of Memphis says he has seen unabsorbed necks several years after the fracture—the Albee bone peg is doubtless the best method of treatment, though wire nailing has been successfuly done. However, in nonunion one is likely to see these cases after the absorption of the neck has taken place. I have recently observed a case in which absorption took place within six weeks. These patients are left with very painful, poorly-functionating hips. Several operations for this condition have been devised, including those of Albee and Brackett, the latter being also attributed to MacAusland, of Boston.

The operative procedure devised by Whitman seems to be the best. Its use has even been extended to old cases of osteoarthritis of the hip, with ankylosis, some cases of old unreduced congenital dislocations of the hip, and to some cases of tuberculosis of the hip with ankylosis. The latter condition is scarcely to be regarded as a good one for this operation.

The reconstruction operation for nonunion, with absorption of the neck of the femur, may be described briefly as follows:

The head of the femur is removed. The greater trochanter is detached in an oblique

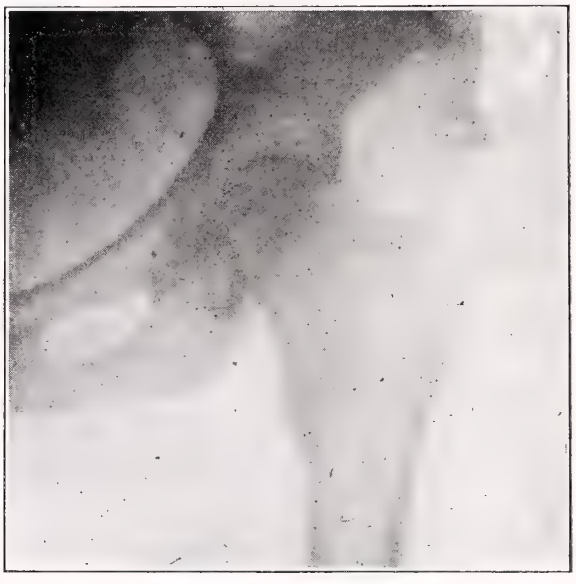

FIG. 4. Radiogram of same case as Fig. 3, taken December 18, 1923. Plaster of Paris spica removed, showing complete consolidation.

plane from the shaft, and re-inserted on the outer side of the shaft of the femur as low down as the attached muscles will allow with the limb carried out in abduction of about 25 degrees. Before the re-insertion of the trochanter, however, the upper extremity of the femur is somewhat remodeled and thrust into the acetabulum. This operation insures a rather painless, functionating hip, especially where proper after-care is given to insure functional adaptation of the limb to the new conditions.

In conclusion, it is desired to emphasize the fact that fracture of the neck of the femur is far from being a hopeless condition, in spite of the fact that the disability frequently occurs in elderly subjects. On the contrary, we may confidently expect few deaths and good results in the majority of cases, with the proper application of the Whitman abduction method of treatment.

ABSTRACT OF DISCUSSION.

Dr. J. R. Bost, Houston: The chief difficulty encountered is holding the fracture in position while reducing it. This nature of injury is amenable to treatment and should not be considered hopeless as held by some. My observation of the Whitman method has been encouraging. The patient should be anesthetized, and then the limbs completely abducted. This method has various advantages, especially as regards apposition of parts and good position. The Ruth method is probably the best of the traction methods, but it fastens patients in bed. Dr. Whitman gives orders to turn the patient at stated intervals. Rings can be arranged to lift the limb at the ankle and knee with a pulley, so the patient can move his limbs.

Dr. R. J. Alexander, Waco: I do not think patients with fractures are receiving the same scientific treatment as other surgical cases, as a rule. We should not be confined to one method of treatment. The first consideration should be to save the patient's life; second, to obtain good function. Good anatomical position will give a larger percentage of good functional results.

In young people I always break down and readjust an impaction, but in the old and where nonunion is likely to occur after breaking down, I do not disturb them. The spica properly applied and made comfortable by protecting the bony prominences with felt, is ideal for selected cases. Confinement in bed is dangerous for old people. I have treated two cases, sitting up in a fracture bed, with good results.

Dr. C. H. Harris, Fort Worth: The diagnosis should be made and treatment instituted before absorption takes place. At first, I used spinal analgesia with apprehension, but now use it routinely. I prefer tropacocain, dissolved in the spinal fluid. My experience with this method has been satisfactory. Age is no contraindication to its use. Fractures should not be manipulated in elderly people until they have recovered from shock, waiting five or ten days, if necessary. Patients should be gotten out of bed early.

Dr. W. B. Carroll, Dallas: With the exception of the traction method, perfected during the past few years for the treatment of fractures in long bones, Dr. Whitman's method of reducing and fixing fractures in the neck of the femur is the greatest contribution to fracture surgery in the past decade. I have treated fractures by this method, in children ten years old and in women ninety years old. It is surprising how comfortable the patients are. If the details of a thorough reduction and carefully applied plaster cast are carried out, the patient will have more freedom than in any other plan of dressing. If the patient is uncomfortable, most probably there is faulty application of the plaster.

Dr. Schoolfield (closing): The normal limit of abduction is ascertained by carrying the sound limb out as far as possible. The fractured limb is then carried out to an equal degree of abduction. Over twenty-five years ago, Dr. Whitman devised this method of treatment for children, later applying it to adults and aged patients.

I have never used spinal analgesia as advocated by Dr. Harris. The profession in general is afraid of it. Dr. Alexander decries the breaking up of impactions. He is entirely correct, so far as moribund patients are concerned, but if the patient's condition warrants it, the impaction should always be broken up, should there be faulty alignment of the fragments.

Early reduction and immobilization of these fractures should be the rule if there is no contraindication, because we are usually dealing with an elderly patient who is liable to hypostatic congestion and pneumonia, if left in bed with an unreduced fracture.

Reduction is accomplished first by traction on the fractured limb until the two limbs are of equal length, then abduction and internal rotation are secured.

MALIGNANT GROWTHS OF THE THORAX AND ABDOMEN.*

BY

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ATLANTA, GEORGIA.

Malignant growths of the thorax and abdomen include a variable group of tumors that threaten the life of the individual. In certain types and locations, as cancer of the lung, death is the rule; in others, as cancer of the stomach, recovery is the rare exception. All of these tumors tend to produce, at least in the beginning, symptoms and signs of an obscure internal disorder, localized somewhere in the viscera. Localization, diagnosis and classification are first in order, in the hope that treatment, either surgical, radium or x-ray, may remove the growth or stay its haste. A metastasis is the result of an unremoved malignancy. Early, accurate diagnosis and prompt therapeutic action, constitute the only hope of a patient in his physical struggle with a malignancy.

TUMORS OF THE THORAX.

Tumors of the thymus gland are relatively rare, but usually fatal in from two to nine months. The growth caps the pericardial sac, surrounds and compresses the trachea, and death is usually from asphyxia. Myasthenia gravis may be an unexplained association. Carcinoma and lymphosarcoma or thymoma, are the chief varieties.

Tumors of the heart are strangely and happily rare. Only fifteen cases of sarcoma of the heart are reported, and these probably originated from benign mucous tissue tumors or myxomas. Rarely, cancer metastases are found growing from the auricular or ventricular walls.

Malignancies of the esophagus are chiefly due to carcinoma. It is about one-half as frequent as carcinoma of the stomach. Not more than 21 cases of sarcoma of the gullet have been reported, and Ewing doubts the sarcomatous nature of several of these. Seventy-five per cent of carcinoma of the esophagus occur in males, and are most frequently in the late forties and early fifties. Leucoplakia, alcohol, tobacco, abrasions and hot foods, may apparently serve as early factors. The tumor may appear as a necrotic ulcer, a protruding mass or a more flat, diffuse infiltration. At

*Read by invitation before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

the upper end it may be difficult to determine whether the growth began in the pharynx or esophagus. Cancer in the lower end causes food to accumulate, with consequent dilatation and regurgitation—esophageal vomiting. A strange sensation that the food is sticking and hesitating on its way to the stomach, the positive difficulty in swallowing, then pain, weakness, unsatisfied hunger and emaciation, tell the story. The vomited food is undigested and contains much mucus and saliva. Vomiting begins, usually, in from one to two months after the onset of symptoms.

Even with complete obstruction, appetite and hunger remain, but emaciation is very rapid. Hoarseness from paralysis of the recurrent laryngeal nerve, and exophthalmos and widening of the palpabral fissures from pressure on the cervical sympathetic may occur. Metastases are common. Starvation and broncho-pneumonia are the most common terminal events, which occur in from three months to two years.

THE MEDIASTINUM.

Just as the signs of brain tumor arise from increased intracranial pressure, so the signs of mediastinal tumors arise from increased intrathoracic pressure. The mediastinum is lined with various sheets of connective tissue, as that covering the lymph nodes and thymus, the fascia, the pericardium and the pleura. Sarcoma is the malignant tumor of connective tissue and naturally is the most frequent tumor. Carcinoma is next in order of frequency. Men are more often affected than women, and there is a fairly even distribution between the ages of ten and sixty. The signs and symptoms arise from the compression, misplacement and infiltration, of the thoracic organs. It is remarkable how much these can be pressed upon and deformed and life go on. As a rule, the symptoms are out of all proportion to the signs.

The lungs, heart and vessels, are under pressure. The symptoms, therefore, are: (a) dyspnea due to pressure on the trachea, the recurrent laryngeal nerve, the heart and the great vessels; (b) a hoarse, brazen cough, like the cough of aneurysm; (c) hemoptysis may occur, suggesting tuberculosis, or pleural effusion may suggest a tuberculous pleurisy; (d) cyanosis and congestion may occur from pressure on a vena cava, and (e) there may be dysphagia from pressure on the esophagus. The tumor may bulge substernally or the chest may bulge laterally. It is essential to distinguish such a tumor from an aneurysm. This is often very difficult without the careful use of the fluoroscope. Tracheal tugging, pain, pulsation and symptoms for more than eighteen months, are in favor of aneurysm. After sixty the growth is usually past the aneurysmal age.

THE LUNG.

Malignant tumors of the lung are more common than benign tumors, and males are more frequently affected than females, in the proportion of three to one. Primary malignant tumors of the lungs form one per cent of all cancers, though the frequency of this malignancy is apparently increasing and it seems more common than early statistics would admit. Primary malignancies are usually unilateral, and the metastases usually multiple and bilateral. Stokes, in 1837, called attention to the fact that the pulmonary tissue intervening between the cancerous growths was healthy. Pulmonary tumors include those arising from the bronchi and the bronchial tissue. Growths of the upper third of the trachea are common, but they are grouped with tumors of the larynx. The lower portion of the trachea and the bifurcation are rarely the seat of tumor growth.

Histologically, three classifications of these tumors are possible: (a) cancer arising from bronchial epithelium; (b) cancer arising from the mucous glands of the bronchi, and (c) cancer arising from the alveolar epithelium. Inflammatory conditions, and of these tuberculosis seems the most important, may be a starting point. The cavity wall of a bronchiectasis may be the primary location. Tuberculosis and carcinoma may occur at the same time, or the early symptoms of carcinoma may simulate those of an ulcerating pulmonary tuberculosis. The tumors are either nodular, lobar, or infiltrating, the latter form being the most common. Metastases are common in the order of descending frequency in the lymph nodes, liver, kidneys, adrenals, the brain and the bones. The symptoms simulate tumors of the mediastinum. The most common are cough, pain, weakness, cachexia and fever. Indeed, if the lymph glands are being rapidly involved, there are more symptoms of a mediastinal than a lung tumor. Bloody and purulent sputum is very common in certain stages of the disease. This purulent sputum is due to bronchiectasis, which is the result of stenosis from cancer pressure on a bronchus. A normal heart, the absence of tubercle bacilli in the sputum, a mucous, bloody sputum extending over several weeks or months, and symptoms of weakness and slight fever, all together are suggestive of lung cancer. Bronchiectasis is simply a complication of lung cancer. The x-ray is not always of diagnostic power. The interpretation may be clouded by evidence of the bronchiectasis or inflammation. The

nodular type is, of course, early for x-ray interpretation, and an infiltrating, fan-shaped growth beginning at the root of the lung requires time for confirmation if seen early. It is a good rule to save x-rays of the thorax for the sake of chronological comparison. The condition is to be also separated from syphilis of the lung.

Primary sarcoma of the lung does exist, but it is exceedingly rare and many cases are difficult to separate from the primary carcinoma. It is a good clinical rule in case of cancer anywhere outside the thorax to be on the lookout for a metastasis in the lungs. If metastasis has already occurred in the lungs, particularly of the multiple, nodular, bilateral type, operation on the primary cancer is of little value. A radiogram of the lungs is, therefore, valuable, both to determine a lung metastasis and as a basis for treatment and prognosis.

THE PLEURA.

Endothelioma is the malignant growth of the pleura. It is usually accompanied by a serofibrinous transudate, and the fluid may be in a large pocket or in a smaller cyst. The tumor may not invade the lung at all, or it may pass into the lung tissue and appear in the form of irregular nodules with metastases in the liver, spleen, pericardium and peritoneum. The disease clinically is like a chronic pleurisy with exudation, thickening of the pleura and adhesions. One case has been reported in a child five years of age. Of course, it occurs chiefly in adults.

THE ABDOMEN.

A discussion of malignant growths involving the female genitals will be omitted, but it is well to remember that cancer of the uterus comprises approximately thirty per cent of all cancer, as compared with cancer of the stomach, which comprises only about twenty-one per cent of all cancer. The word abdomen comes from the Latin word abdo, to conceal, and malignant growths of these organs frequently so insinuate themselves and so graduate their increasing grasp on the tissues of the organs involved, that the evil prognosis is already written large when the diagnosis is made. I have known a small hypernephroma embedded in one kidney to cause fever, sweats and emaciation, without urinary or x-ray findings even to hint at the cause, until death and an autopsy made an anatomical diagnosis possible.

THE STOMACH.

Gastric cancer is rare in negroes, as compared to whites. It seems comparatively rare in tropical countries. Heredity seems a feature. Napoleon and Napoleon's father, died of gastric cancer. Gastric ulcer unquestionably increases the predisposition to gastric cancer. Duodenal ulcer seems not to exert such a large predisposition. The pylorus is the most frequent location; then the lesser curvature more than the greater, and the posterior wall more than the anterior. The fundus is a rare location for cancer. Adenocarcinoma is the most frequent type, and then soft, ulcerating masses of the medullary cancer. The scirrhous cancer is the hard type with an abundance of stroma, and it is the commonest cause of cancerous stenosis of the pylorus. The colloid cancer involves all the coats of the stomach and has its beginning in large alveoli filled with translucent colloid matter. Secondary cancer of the stomach is comparatively rare, but metastases occur most frequently from cancer of the breast. Strangely enough, there may be no gastric symptoms during life, and the gastric cancer may be disclosed at autopsy. This is the so-called latent cancer. Cases have been diagnosed as pernicious anemia or cardiac disease.

The symptoms are chiefly loss of weight, pain, dyspepsia, vomiting and tumor. Weakness is usually proportionate to the loss of weight, and anemia follows. Fever and chills occur, with edema of the ankles as a terminal event. Constipation and anorexia are common. The coffee-ground vomitus is suggestive, but lactic acid indicates gastric stasis and nothing more. The only hope is surgical interference after early diagnosis. Diagnosis, courage and action, are good rules, unless the absolutely inoperable stage has been reached. Every case of gastric disturbance, particularly if associated with loss of weight and anorexia, throw upon the physician the burden of proof that there is no gastric ulcer.

THE INTESTINES.

Carcinoma is the most common malignancy of the intestines, while sarcoma is rare. About eight per cent of all carcinomas are intestinal. They are more common in females than in males, and actually occur, but rarely, in infants. The greatest incidence is between 60 and 65 years. The rectum is the principal location for intestinal cancer and next in order, the caecum and the appendix. There is more carcinoma of the appendix than is supposed. Only about three per cent of all intestinal cancers occur in the small intestine. In the duodenum, carcinoma occurs as a post-ulcer process. There may be a general intestinal polyposis as part of a multiple carcinomatosis, or as circular cancer with stenosis.

Clinically, a palpable tumor, loss of weight, anemia and cachexia, represent an advanced

state. Stenosis is indicated by constipation or diarrhea, colicky pain and visible peristalsis.

Inasmuch as rectal cancer is the most frequent form of malignancy of the intestines, no physical examination is complete unless an examination of the rectum is made. Constipation may result from stenosis of the rectum. An examination of the rectum is always in order with digestive or alimentary complaints.

Cancer of the appendix is apparently increasing. It is peculiar in that 30 is the average age of attack. The symptoms do not differ from an acute or chronic appendicitis, and a clinical examination is usually impossible. John B. Murphy made a diagnosis of a chronic appendicitis in William Rainey Harper, the first president of the University of Chicago, and at operation, a carcinoma of the caecum was found.

THE LIVER.

Primary cancer of the liver is very rare. It may occur in a multiple, nodular form, or mass growth, or as an infiltration. Jaundice, enlargement of the spleen, edema and the symptoms of acute intoxication, mark its rapid course.

Secondary cancer of the liver produces the largest liver known to medicine. A weight of 33 pounds has been reached. Sarcoma is very rare. It is, of course, impossible to differentiate between a primary and a secondary cancer of the liver, unless a primary cancer of the breast or rectum or other location is evident. An enormous cancer of the liver may occur without any pain, and even without jaundice. When jaundice does occur, it is usually mild, unless the common duct is occluded. Emaciation, with mild jaundice, distention of the upper abdomen, and a large liver, point to hepatic carcinoma. Occasionally the metastatic nodules in the liver may be felt under the thin skin. Fever, edema and anemia, occur and patients rarely live more than a year. These cases are to be differentiated from a hypertrophic cirrhosis, which is rare in America. A melanosarcoma does occur, and blindness in one eye may intimate the cause of the liver pathology. Syphilis of the liver usually gives a large, smooth organ, but is to be thought of and ruled out before a definite diagnosis of liver cancer is made. The condition is to be distinguished from a fatty liver, which is very large. In fatty liver there is never any jaundice, and a history of obesity is usually present. As a rule, the treatment is symptomatic—and hopeless.

THE GALL BLADDER.

Carcinoma of the gall bladder is usually an adenocarcinoma, and forms five per cent of all carcinomas. It affects four women to five men, and occurs at the average age of 58 years. It apparently has a definite relation to the presence of gall stones, ranging from 69 to 100 per cent in various statistical series. The irritation of the stones, the cholesterin and the digestive irritation of the bile, seem to influence the cancer formation in this organ. In the early stages attacks occur which are not distinguishable from gall-stone colic, except that a subnormal temperature may be persistently present, and in patients three score years or more of age, a persistently subnormal temperature may be a metabolic sign of early cancer. I know an old man of 68 years of age who was operated on for gall-stones, and both stones and cancer of the gall-bladder were found at operation. After a cholecystectomy all of his symptoms disappeared, and he died four years later in a third attack of angina pectoris. In cases of malignant jaundice with constitutional symptoms characteristic of cancer and without marked enlargement of the liver, a palpable abdominal tumor, or objective signs of a new growth elsewhere, cancer of the ampulla of Vater is to be considered.

THE PANCREAS.

Cancer of the pancreas forms about two per cent of all malignancies. The location of the tumor is usually in the head of the pancreas, and it may extend rather diffusely. Strangely, the tail is rarely affected. Metastases occur in the nearby lymph nodes, the liver, the peritoneum and the stomach. Strange to say, metastases are not common or characteristic, probably because the disease is quickly fatal. The adenocarcinoma arises from ducts and simple carcinoma from the pancreatic tissue proper. Sarcoma of the pancreas is extremely rare.

About one-fourth of the cases of the head of the pancreas are palpable. I have known one case of tumor of the head of the pancreas to be diagnosed as cancer, but operation showed the supposed cancer to be syphilitic in origin. The symptoms include jaundice, a subnormal temperature, rapid emaciation, a distended gall-bladder without enlargement of the liver, and a normal spleen. Increase of the fat in the stools, and pain, are common, and an associated diabetes is rare. The pains are usually between the umbilicus and the ensiform, and are paroxysmal. A fatty diarrhea is rare. The nausea and vomiting increase, with rapid wasting and cachexia. Most of the patients are over 40 years of age.

THE SPLEEN.

The spleen is the most frequently enlarged abdominal organ, and so far as its size is concerned, is most frequently influenced in the greatest variety of disease, as for example, malaria and typhoid fever. On the contrary, primary carcinoma of the spleen is unknown. Even sarcoma of the organ is very rare. I have seen a tuberculous spleen so nodular and enlarged that it resembled a multiple cancer metastasis. The same may be said of the rare syphilitic spleen. Clinically, it is essential to remember the various diseases characterized by enlargement of the spleen, and that malignancies of the spleen are exceedingly rare. Hodgkin's disease does occur primarily in the spleen, but with great rarity. In most cases of malignancy of the spleen, a prompt splenectomy offers a favorable prognosis.

THE KIDNEY.

Carcinoma of the renal epithelium occurs either in the form of the papillary adenocarcinoma or alveolar carcinoma. Metastases from either may be widely spread. They have been found in the brain and have been known to extend through the renal vein to the right heart. Carcinomata are often mistaken for hypernephromata.

Another interesting tumor of the kidney is sarcoma. It is not rare as a complex malignant structure, grows to an enormous size, and to a pitiable ending. Most cases are in children under three years of age. I saw one in a child two years of age, that filled the major portion of the abdomen and pelvis.

The hypernephroma is a tumor from deposits of adrenal tissue under the kidney capsule. These tumors are not derived from renal epithelium, and they have a high fatty content. The tumor is easily differentiated from renal tissue by a capsule, and may contain a cortex. These tumors are yellowish, with abundant blood supply, and some are disposed to hemorrhage and cyst formation. Hypernephroma may occur primarily in the liver or retroperitoneally, or may involve the female genitals in the true pelvis.

Carcinoma of the adrenal glands occurs. It has no relation whatever to hypernephroma. The tumors are unusually large, indeed, much larger than the adrenal from which they spring, and are characterized by adhesions to the kidney and neighboring organs.

CONCLUSIONS.

A resumé of this rather generalized study seems advisable:

1. The strange frequency of malignancies of the esophagus in the male, and its rarity in the female.
2. The apparent increase of cancer of the lung, and its appeal for the development of a rapid and efficient lung surgery.
3. The extreme rarity of malignancies of the heart.
4. The extreme rarity of malignancies of the diaphram.
5. The occurrence of gastric ulcer as a frequent antecedent to gastric cancer.
6. The ease with which a gastric ulcer may be followed by a carcinoma, and the comparative rarity of a carcinoma following a duodenal ulcer.
7. The rarity of cancer of the small intestines.
8. The apparent increase of malignancies of the appendix.
9. The fact that the rectum is the most frequent seat of carcinoma of the intestine.
10. The extreme rarity of malignancies of the spleen as compared with malignancies of the pancreas.
11. The rare involvement of the tail as compared with the head of the pancreas.
12. The difficulty of differentiation between a massive carcinoma of the liver, the enlarged liver due to syphilis, and a hypertrophic cirrhosis. Indeed, passive congestion is the most frequent cause of enlarged liver.
13. The frequency of sarcoma of the kidney in infants and its rarity in adults.
14. The rarity of malignancies of the thorax and abdomen in the negro race, and their frequency in the white race.

ABSTRACT OF DISCUSSION.

Dr. M. L. Graves, Galveston: Dr. Roberts has presented a clear and comprehensive review of malignant diseases of the thorax and abdomen. These diseases afford us many errors in diagnosis. The Doctor has mentioned practically all the malignant diseases of the thorax, but not the leukemias and Hodgkin's disease. There are cases of this latter disease where the beginning is in the thorax, and so far as the course and ultimate termination is concerned, it constitutes a malignancy. Here we get pressure symptoms first. The *x*-ray will not differentiate malignancy and Hodgkin's disease, and so we have to depend on the clinical picture a great deal for our diagnosis. I know of nothing more confusing than malignant disease of the pericardium. I remember a case in which the *x*-ray picture showed a large shadow which could not be differentiated from the heart. The diagnosis of malignant disease of the lung, is difficult until pressure and toxic symptoms are present and metastasis has begun. Sometimes these cases can be diagnosed by sputum examination. The patient may cough up blood-tinged sputum. Dr. Violet Keiller recently diagnosed a case from sputum of this type, in which carcinomatous cells were found. I have seen malignant disease of the thorax associated with carcinoma of the breast in the female. When the diagnosis is made, showing mediastinal or pulmonary involvement, operation is inadvisable unless deep *x*-ray therapy can help.

Malignant disease of the abdomen often presents a confusing picture. We recently had a patient in John Sealy Hospital who, during a course of progressive muscular atrophy, had three attacks of what appeared to be gall-stone colic. These attacks were each followed by jaundice, which cleared up in a short time. The patient was emaciated by his progressive muscular atrophy and this accompanying malignant condition. In this case there was a large malignant mass in the common duct, which was producing marked pressure.

Carcinoma of the pancreas may produce an intermittent jaundice and painful paroxysms resembling gall-stones. I recently saw, with three physicians of this State, a patient, who had a remittent jaundice. We considered malignant disease of the abdomen, carcinoma of the head of pancreas, cirrhosis of the liver and carcinoma of pylorus. At autopsy this patient proved to have an old healed ulcer of the stomach, chronic fibroid pancreatitis, marked hepatic cirrhosis, and carcinoma of the periduodenal glands. We had then an interesting syndrome that was produced by the addition of other diseases to the primary disease. In the pretoxic stage of malignant abdominal disease, the diagnosis is difficult. After the toxic symptoms are established and we have the blood dyscrasia, loss of weight and other accompanying symptoms, the evidence is usually conclusive.

Dr. R. W. Baird, Dallas: I wish to emphasize the scarcity of signs and symptoms in some well marked cases of intrathoracic cancer. In other cases there is great distress and many physical signs over the chest, when the pathology is often much less in the latter than in the former. I have at times been impressed by this fact.

Just a short time ago, two women came under my observation. One had had a high amputation of her thigh for carcinoma, about six months previously. At the time of her visit, she was making no serious complaint. There was only a slight loss of weight that she could not account for, no pronounced dyspnoea or cough, practically no expectoration, and no pain or general discomfort. Examination showed fairly well nourished woman with a moderate degree of anemia. No masses were found anywhere over the body, and only an occasional popping moist rale was heard over either lung, and yet the *x*-ray showed an appalling amount of involvement of both lungs, and this patient died two months later, following a right-sided hemiplegia of six days duration.

The other patient had undergone an amputation of the left breast eighteen months previously. She had been quite comfortable, except for a few transitory pains through the chest, until two weeks before I saw her, at which time she became quite dyspnoeic, had frequent spasmodic cough, some expectoration, slight fever, rapid pulse and rapid loss of weight. Examination showed an undernourished slightly anemic woman. Many medium dry and moist rales were heard over chest. Her temperature was 100, the pulse 108 and respiration 24. There were no heart murmurs, but the valve sounds were muffled. *X*-ray showed a small amount of infiltration in both lungs. This patient died six weeks later from massive hemoptysis.

In one case there was a tremendous amount of involvement of both lungs, with very few symptoms or signs, and in the other case a comparatively small amount of lung tissue was involved by the cancer and yet the distress was marked. We cannot estimate the extent of involvement in cancer of the lung by the physical signs and symptoms of the patient. We must call to our aid the *x*-ray in order to appreciate fully the seriousness of the situation.

I was very much interested in Doctor Roberts discussion of malignancy developing in a case of pulmonary tuberculosis. I have seen one such case. I had had the patient under my care for several years prior to the war, on account of a well marked case of pulmonary tuberculosis. He had apparently recovered. He joined the army and went abroad with the troops for two years. After his discharge he came to me complaining of cough, pains in the right shoulder, slight rise in temperature and rather rapid loss of weight. Examination showed the right upper lobe involved, and tubercle bacilli were found in the sputum. Treatment was unavailing and in a short time he died. Autopsy showed a cancerous condition of the lung, superimposed on an old tuberculous process.

Dr. Roberts (closing): I do not believe there is any drug in use at the present time that has the power to arrest a malignant growth. We do know that opium will inhibit metabolism, and it is possible that a very slight influence may be exerted by this drug. We may say, however, that there is no drug that offers any promise in the inhibition or cure of cancer.

The study of abdominal tumors is exceedingly interesting. There are two books that throw considerable light on the subject, and are of clinical value. The first of these is by Dr. Richard Bright, of nephritis fame, on "Clinical Memoirs on Abdominal Tumors and Intermescence." This book was published by the New Syndenham Society. The second is by William Osler, and is called "Lectures on the Diagnosis of Abdominal Tumors." Both of these are valuable and are worth while. The first was written before the era of aseptic surgery, and Osler was helped in his first monograph by the genius and surgery of William Halstead.

The surgeons accent method in operation. Taking from them the hint, we internists and clinicians would do well to accent, within reason, method in physical examination. The use of the thumb in the palpation of the abdomen is of increasing service. Particularly is this true in the examination of the gall-bladder. John B. Murphy hooked his fingers under the right costal margin in his effort to palpate a gall-bladder. I find that the finger nails cause the skin of the abdomen to flinch, and this sensory stimulation causes a contraction of the abdominal muscles to such a degree that palpation is impossible. The point, therefore, in palpation either of the gall-bladder, the spleen or any other abdominal organ, is to avoid the stimulation and contraction of the abdominal muscles, and to keep them flaccid.

To accomplish this end the head and shoulders of the patient should be elevated to an angle of about thirty degrees, the knees drawn up, and the patient told to take three deep breaths through the mouth. The examiner's hand should be warm. The patient is told to take a deep breath through the mouth, and the ball of the thumb, either of the right or left hand, is put just below the right costal margin, at the outer border of the right rectus muscle. As expiration follows inspiration, the thumb presses inward, gently but firmly, and as a rule a tender gall-bladder becomes immediately noticeable to the patient. Such an examination is easily available to every physician, and is often worth far more than complicated examinations to determine pathology of the gall-bladder, or even the use of the *x*-ray itself. The same method of palpation holds for the spleen and the left upper quadrant.

SHORT WAVE-LENGTH *X*-RAYS IN THE TREATMENT OF NON-MALIGNANT UTERINE CONDITIONS.*

BY

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In no other field of medicine has radiation therapy given more brilliant results than in the treatment of metrorrhagias, with or without fibroids. From being used only in exceptional cases, where operation was contraindicated, it has gradually been adopted by many of the world's leading gynecologists as the method of choice, to be resorted to except when the presence of some unusual condition demands operative interference.

As the results of radiation therapy have become more generally known, cases are more frequently referred by the general practitioner direct to the radiologist for treatment. Therefore, the radiologist should be skilled in the differential diagnosis of pelvic conditions, so that he can detect the presence of those conditions that require surgery.

There is really nothing inherent in the practice of radiology, which prevents the physician engaged in this specialty from becoming proficient in the diagnosis of pelvic conditions. It would seem more difficult for one whose whole training has been in pelvic surgery, to become properly versed in the intricate physics of radiology. The ideal situation exists when the gynecologist, radiologist and the patient's own personal physician, work together in harmony, with mutual recognition of each other's limitations and possibilities. The coöperation of the general practitioner is especially valuable, for by virtue of his more intimate contact with the patient he is better able to provide the guidance, encouragement and advice, that all patients need and should have, whether going through the period of convalescence following operation, or the period of "watchful waiting" attendant on the gradual retrogression of the tumor and the occurrence of the menopause brought on by radiation.

Uterine fibromyoma is the most common nonmalignant neoplasm occurring in the human body. It is difficult to estimate its frequency, since myomas of the uterus may present no symptoms, being discovered accidently through routine examination or during operation for some other condition. Graves estimates that 40 per cent of all women have myoma. The opinion is frequently expressed that the great majority of these tumors remain small, do not give rise to symptoms requiring treatment, and tend to disappear at the menopause. Kouwer believes that more than half do not require any treatment. Bland-Sutton, on the contrary, says: "The uterine fibroids often remain for many years without producing more than temporary inconvenience, but those that remain harmless form a small minority."

MODE OF ACTION OF RADIATION.

There are two different conceptions of the mechanism of the action of radiation on uterine fibromyomata. One is that the action of the rays on the ovary and its secretions leads to cessation of the menstrual function, and this in turn causes a decrease in the size of the fibroid. In other words, the advocates of this theory hold that the retrogression of myomata is brought about in exactly the same manner as by surgical castration, or after the onset of the natural menopause.

The other theory is that radiation has a decided influence upon the tumor mass itself, in addition to its action on the ovaries. This assumption seems reasonable in view of the fact that in many of the cases treated in the past by the lower voltage *x*-rays, retrogression of the palpable uterine tumor preceded by two or three months cessation of the catamenia, and that in many cases, the retrogression was permanent, even without the production of a permanent menopause. On the other hand, a myomatous uterus may continue to grow gradually or slowly, or may suddenly show a more or less rapid increase in size several years following the physiological menopause. The fact that adequate radiation in such cases will cause an appreciable reduction in the size of the uterine tumor several years after the cessation of the menses, as well as during menstrual activity, would certainly indicate that the direct action of radiation upon the tumor itself was of considerable importance. The retrogression of the uterine fibroid following adequate radiation, is greater and more rapid than that produced by physiological cessation of the menstrual function. The action of radium in the case of large tumors is less efficient than that of roentgen-rays, which include the entire tumor.

In addition to the clinical observations above made, there are pathological studies which emphasize the necessity of radiating the intrauterine tumor in these cases. During the past ten years much valuable data has been accumulated from the histological examination of ovaries and uteri removed following more or less prolonged and extensive radiation. Ewing states, "The steady and often rapid regressions of these large and rather cellular tumor masses are quite

*Read by invitation, before the Texas Radiological Society, San Antonio, April 28, 1924.

surprising and difficult to explain. The tumors undergo edematous softening and liquefaction with the formation of cysts, or there may be widespread, simple necrosis with shrinkage and fibrosis. The result seems referable in part to the inhibition of ovarian function, but mainly to the sclerosis of the blood vessels, and often, as Gellhorn states, to direct injury of muscle cells."

The report of Huessey and Wallart may also be mentioned. After histological studies of radiated ovaries and uteri, they reached the following conclusions:

"1. *X*-rays exert an elective and destructive action upon the follicles of the ovaries. However, some follicles may escape destruction and retain vitality.

"2. The interstitial gland is not only not destroyed but seems to become hypertrophic.

"3. *X*-ray treatment is, therefore, not a genuine castration because only the follicle apparatus but not the ovarian parenchyma, is destroyed. This perhaps explains the fact that in many cases the symptoms of artificial menopause are milder than after operative castration.

"4. Return of hemorrhages after *x*-ray treatment and an occasional increase of growth of the tumor cannot be excluded with certainty because with the present technic and the cautions necessary to avoid *x*-ray injuries, not all follicles can be made to disappear."

This was written in 1915, and applied to conditions prevailing at that time. At the present time, it is sufficient to state that with modern equipment all the technical difficulties have been overcome and adequate radiation can be given, without danger, to insure the permanent cessation of the menstrual function.

CONTRAINDICATIONS.

With the advent of the short wave-length *x*-ray therapy, the contraindications to the radiation treatment of fibroids are becoming fewer. In this connection, Beclere speaks as follows:

"Before the great experience of the radiotherapist and the improvement of their instruments and technique, most of the contraindications which were formerly and some of which are still advanced today, against the roentgenotherapy of myomata, have successively disappeared. By reversing the ancient formula, one might say that today roentgenotherapy is contraindicated only in cases in which, for some urgent reason, surgical intervention becomes absolutely necessary."

Submucous fibroids protruding through the cervix should, if possible, be surgically removed, and the uterus then irradiated. Cervical fibroids, fibroids accompanied by pregnancy, and those complicated by degeneration or other marked inflammatory changes, also require surgical treatment.

The most popular argument against *x*-ray treatment of uterine fibroids is that fibroids may undergo malignant changes. However, Graves believes that rapid growth is rarely ever of a sarcomatous nature, but that the increased size is due to an edema or some other form of degeneration. He further states, "There is a wide variation in the estimates of the frequency with which sarcomatous changes take place. This is most generally put at 5 per cent. More recent investigation, with improved staining methods, have demonstrated that many of the diagnoses are erroneous, and that the actual proportion is nearer 1 per cent." In this connection, Sir John Bland-Sutton says:

"Some surgeons believe that sarcomatous changes may arise in uterine fibroids. I do not share this opinion, preferring to believe that many tumors reported as fibroids which have undergone sarcomatous degeneration, were in all probability sarcomatous from the beginning. They should be called sarcomatous fibroids; for a sarcoma will sometimes arise in a uterus already occupied by a common hard fibroid, and mock all the clinical varieties, appearing as a submucous polypus protruding at the mouth of the womb, as an interstitial tumor or as a subserous fibroid with a thin stalk. A comprehensive study of the question indicates that sarcoma may arise in the tissues of the uterus during intrauterine life, infancy, and at any period up to extreme old age."

The rarity of coexistent conditions is shown by LeRoy Broun, in a study of 1500 consecutive cases operated upon for myomata uteri. Sixty-six of the 1500 cases were malignant, and distributed as follows: Carcinoma corpus uteri, 20; carcinoma colli uteri, 9; sarcoma, 7; carcinoma of the ovary, 4, and papillomatous ovarian cyst, 17.

The possibility of malignant complication merely emphasizes the necessity of taking a careful history, and making a thorough physical examination, before any form of treatment is undertaken. If malignancy is suggested, it must not be forgotten that radiation, when properly applied, is the most efficient method we now have for the treatment of most cases of malignancy of the uterus.

TIME OF TREATMENT.

The logical time for the administration of radiation in the treatment of fibroids, is immediately after menstruation. When given at this time, the next period will be lessened, possibly, or entirely aborted. If the treatment is given later in the intermenstrual period, the subsequent flow will probably not be reduced; it may even be more profuse.

The reason for administering radiation within the first seven days following menstruation, is that the Graafian follicles are especially sensitive to radiation during their developmental stage. The cells constituting the Graafian follicles have undergone rapid growth, as shown by numerous mitoses, and the inhibitory effect of radiation upon proliferating cells is well known. If radiation is

given early enough and strong enough to prevent the normal development of the follicle before it has begun its secretory phase, the menstrual cycle will be interrupted. If the follicle has developed to the secretory phase, the hormones have already entered into the circulation, and the next menstrual period is inevitable, regardless of the effect of the radiation upon the follicle itself.

TECHNIQUE.

It is generally agreed that the effects of *x*-rays and radium are the same when equal quantities of radiation are absorbed. In many cases, *x*-rays and radium may be used supplementary to each other. The action of radium is more local than that of the *x*-rays. Not only is homogeneous radiation out of the question with radium alone, but it is frequently impossible to deliver a sufficient intensity to the ovaries and throughout the entire tumor mass, if the tumor is of any size, without producing a severe local reaction. For example, the effect beyond 3 m. of 100 milligrams of radium, effectively screened, in 24 hours, is very small. For this reason, roentgen-rays either alone or in conjunction with radium, should be used in all large tumors, where it is evident that homogenous radiation of sufficient intensity cannot delivered throughout the entire tumor mass by the intrauterine application of radium, to insure a permanent menopause and a satisfactory shrinkage of the myomatous mass itself.

Gellhorn advocates the use of the *x*-rays in young women following dilatation and curettage, where it is desired to cause a temporary menopause or simply a lessening of the flow. Childbearing is possible after radiotherapy, and radium should never be used in a woman who may become pregnant, because "even moderate doses of radium in the uterus cause sclerotic changes which predispose to dystocia." A further contraindication to the application of radium, is the presence of mild inflammatory infections of the uterus and the adnexa, not because of any detrimental effect of radiation under these circumstances, but because of the opening up of channels of infection incidental to the insertion of the radium. We have found that such conditions often clear up following irradiation, in the same manner that some other infectious processes respond to *x*-ray treatment. These cases, however, must be carefully selected. Chronic adnexal disease so slight as to escape diagnosis need never be a deterrent to treatment.

In this connection, Ewing has the following to say:

"All the bad results that I have seen with the radiation treatment of myomas have occurred in cases in which the uterus was dilated, the mucosa curetted off, and radium inserted into the cavity. This familiar procedure is not without some hazards, as it prolongs convalesence and converts the treatment into a substantial gynecological operation which may not always be necessary. Before the days of radium I performed autopsies on bodies of women who died from latent infection stirred up by simple exploration of the uterus or currettage."

We appreciate the fact that the intrauterine application of radium is easier for the gynecologist to apply personally, and this may be the reason why radium has been accorded such great popularity in the treatment of these cases. The intrauterine application of radium carries with it the added element of hospitalization, to insure aseptic surgery and usually anesthesia. The great majority of patients will welcome the elimination of the anesthesia and even the short period in the hospital, which are not necessary with the administration of *x*-rays. However, radium has a very definite use in those cases where dilatation and curettage are indicated for diagnostic purposes.

For several years we have obtained excellent results with the longer wave-length *x*-rays (our first case was cured about 16 years ago), and in rare cases, have found surprisingly small doses, sufficient to arrest hemorrhage. In other cases, in stout people or in large tumors, repeated treatments were necessary through multiple fields. Full erythemic doses had to be given through each area, and in a few cases, the results were not satisfactory, the patient becoming discouraged at the slow progress and discontinuing treatment. For these reasons, and to obtain the greatest depth dose with the least superficial exposure, we adopted short wave-length technic. In the great majority of cases, the short wave-length *x*-rays may not be an absolute necessity, but they are certainly a great convenience. With the shorter wave-length *x*-rays, results are obtained more quickly, more certainly, and with less inconvenience and discomfort to the patient.

Because we have assumed that the roentgen-rays exert an immediate and direct action of great importance upon the fibromyomatous uterus, in addition to the primary ovarian effects, we deem it advisable to deliver the required dosage, both into the ovaries and throughout the tumor.

Our technique is as follows: Voltage, 200,000; focal-skin distance, 50 cm., and filtration, .5 to 1 mm. of copper plus 1 mm. aluminum. With these factors and the heavier filtration, we estimate our effective wave length at .138 A. U., the 10 cm. depth dosage being about 40 per cent. The

erythemic dose with these factors, through one port of entry, is 520 ma. min., with our standard tube.

We prefer to regulate our depth dosage by change of filters, according to the size of the patient and the size of the tumor. In large tumors or stout patients, in order to minimize the possibilities of radiation sickness, we divide the treatment into four exposures, allowing an interval of two or three days between treatments. Each exposure is slightly less than one-half the erythemic dose, alternating the half doses over the two fields, one anterior and the other posterior. The divided dosage never results in more than the slightest erythema, and only rarely is there epilation of the public hair. In thin patients, a smaller dose is used.

We realize that this dose is more than is absolutely required in certain cases, but every case should obtain sufficient radiation to insure good results, and the greatest possible retrogression in the size of the tumor in the shortest possible time, with the least possible inconvenience to the patient in the number of treatments, and with the least amount of radiation sickness and, more especially, with the smallest proportionate amount of superficial exposure.

TREATMENT.

The chief positive indications for the treatment of uterine fibroids are, hemorrhage, pressure symptoms, rapid growth and large size of the tumor. Radiation, on account of its safety and efficacy, should also include all symptomless fibroids around the age of 40. In this group of cases the maternal equation is usually settled, either by the patient already having a family, or the fibroid change in the uterus has caused such structural changes as to render childbearing impossible.

Radiation treatment of fibromyomata of the uterus need not be limited to patients approaching the menopause, although it is more difficult to secure results in younger patients. Few myomata appear under the age of 25. By careful dosage it is possible to produce a temporary menopause in many of these cases, with marked improvement and complete cure. Radiation is simple, safe and, even in younger patients, usually effective. A general knowledge of this fact should encourage patients to report earlier and more promptly for the relief of symptoms.

Fear of the knife will often keep patients away from their physician for a long time, and many women will undergo a long period of invalidism before consenting to hysterectomy. Myomectomy is perhaps the desirable method of treatment of small fibroids in young women who desire children. It must be borne in mind, however, that the patient is risking the possibility of growing more fibroids, and the chances of becoming pregnant are considerably lessened. According to Graves, abortions are not of infrequent occurrence in myomatous women. Findley asserts that 30 per cent of myomatous women are sterile, as compared with a general average of 10 per cent. Fibroid tumors are seldom single, and it is not uncommon for other tumors to develop at an early date and cause sufficient hemorrhage and pressure symptoms to demand immediate treatment. Bland-Sutton voices the opinion, "After the removal of fibroids in the procreative period of life, a woman is more likely to grow more fibroids than to conceive successfully."

It is frequently impossible for the attending surgeon to predetermine the multiplicity of fibroids. Hysterectomy is often advocated, even in young women, as a method of choice, in view of the improbability of pregnancy going to full term when other fibroids are present. Radiation therapy would surely be preferable to such a radical procedure.

Subsequent pregnancies are possible after the radiation treatment of fibroids. This is borne out by many observers. Clark and Keene have noted five subsequent pregnancies out of a total number of 527 cases radiated for myomas and other benign lesions causing uterine hemorrhages. This is of the greater significance when it is realized that the great majority of these patients were treated by radiation after childbearing possibilities had ceased, either through age limitation or because the uterus had undergone such structural changes that as to render childbearing impossible. These authors believe "the consideration of pregnancy has but little bearing as a deciding factor in the choice of treatment."

Fibromyomata of the uterus 12 cm. or larger in diameter, offer a definite contraindication to radiation, according to Taussig. Gellhorn considers radiation contraindicated only when the tumors extend above the umbilicus. We have found that very large tumors may be successfully treated by radiation. Even though they may not completely disappear, the symptoms due to hemorrhage and pressure are quickly relieved, and the myomatous mass diminishes remarkably in size. We have not found the size of the tumor a definite contraindication to roentgen-ray treatment. Operation may be necessary in case of large tumors complicated by acute pressure symptoms and extensive degenerative processes giving rise to a fibroid toxemia.

Recent literature contains ample proof that the majority of cases of uterine fibroids are cured by radiation. Martius believes that with appropriate choice of cases, about 100 per cent of purely functional or myomatous hemorrhages of the uterus are curable by radiotherapy. Matthews reports 98 per cent of 108 cases of nonmalignant, intractable uterine bleeding, with or without fibroids, cured by radiation. Carter asserts that deep *x*-ray therapy is good for 100 per cent of cures in the treatment of uterine fibroids, whether or not associated with hemorrhage, and in the treatment of uterine hemorrhages of the menopause. He reports 21 metrorrhagias, all of which responded promptly to *x*-ray treatment.

Crossen reports that the bleeding was stopped in 95 per cent of 600 cases treated. Clark and Keene controlled the bleeding in 91 per cent of 476 cases, by the first application of radium.

Schmidt of Berlin, achieved a clinical cure in 2,359 cases out of 2,441 metropathies, and of a total 3,748 myomas treated by roentgen-rays or radium, clinical cure was obtained in 3,417 cases. That is, clinical cure was effected in 96.62 per cent of the metropathies and 91.08 per cent of the myomas.

Corscaden reports that 203 cases were treated between June, 1914, and July 1, 1922, at the Presbyterian Hospital, New York, with only 3 cases of complete failure. Beclere states: "The statistics of 700 cases which I reported show that but 1 per cent of cases was unsuccessfully treated, while in only 9 cases was roentgenotherapy wholly ineffective and obliged to give place to the knife. This shows the efficacy of the new treatment."

The radiation treatment of fibromyoma is painless, and any ill effects, such as nausea, anorexia, retching, etc., are usually quite temporary. The patient can live her ordinary life, simply arranging for a few days rest. The treatment, if effective, gives relief quickly, causing a myoma to shrink more or less rapidly, and menorrhagia stops in all cases. Radiotherapy may not satisfactorily relieve pain due to urinary symptoms or not directly associated with menstrual function.

In the treatment of fibroids by radiation, no elaborate preparation is required, and the patient is relieved of the mental anxiety that must necessarily attend a surgical operation. Malignant changes do not occur following adequate treatment. A patient whose general health is greatly impaired, usually recovers very rapidly when the hemorrhage has been arrested, and the shock, so often inseparable from hysterectomy, is avoided.

In the hands of the expert, radiation has no mortality; whereas, hysterectomy, even in the hands of excellent surgeons, has a mortality of from 3 to 5 per cent.

It is possible in a large percentage of the younger women to relieve the pain, pressure, hemorrhage and other symptoms, by careful dosage without producing permanent cessation of the menstrual flow. After comparing the results of radiation with those following hysterectomy, no one will question the superiority of the lesser over the major procedure. Even in young women, in whom the treatment must be sufficient to produce complete suppression of the menses, the only ill effects are those noted by all women passing through the menopause. These symptoms vary considerably, some experiencing very little, if any, disturbance, while others are very much upset. Our experience indicates that the menopause resulting from radiation is not attended, as a rule, by such severe nervous disturbances as following hysterectomy.

In conclusion, I wish to express again my opinion that radiation is the method of choice in the treatment of uterine hemorrhage occurring after middle age; in those cases of intractable uterine hemorrhage which do not respond to the simple surgical procedures, and in uncomplicated uterine fibroids.

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Whittington's Consumption Cure a Fraud.—The postal authorities have closed the mails to Frederick Graham and the Tuberculosis Home Remedy Company by the issuance of a fraud order. The Whittington "cure" was the subject of a report in *The Journal of the American Medical Association* in 1916; analysis in the A. M. A. Chemical Laboratory at that time showed it to be a flavored syrup devoid of any potent ingredient except alcohol. The evidence brought out in the hearing by the Post Office authorities showed that the preparation was claimed to contain sugar, glycerin, alcohol and the extract matter from pyrus malus follia (apple leaves), gentian root, rhamnus purshiana (cascara) and licorice root. Analyses in the Bureau of Chemistry of the Department of Agriculture indicated the absence of gentian and the presence of only traces of cascara and licorice. No evidence was submitted to show how apple leaves had come to be hit upon as a "cure" for tuberculosis.—*Jour. A. M. A.*, June 14, 1924.

EARLY INDICATIONS AND THE TREATMENT OF BRAIN TUMORS.*

BY

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Accurate and scientific diagnosis in any branch of medicine is a difficult matter, and it is especially so in brain tumor work, where the same symptoms occur from lesions located at various places within the cranium. In addition to diseases peculiar to the nervous system itself, the brain is subject to the influences of almost every disease and often it bears the brunt of a disturbance which may simulate tumor manifestations.

Many years of study, observation and experience are required before average proficiency can be obtained in this field, especially from a surgical standpoint. The diagnosis and treatment of brain tumors are largely surgical procedures, and, as in other branches of surgery, the operator must be thoroughly familiar with every known phase of the question in order to avoid the numerous pitfalls, and to keep the work at a high standard.

As a direct result of investigation by various neuro-surgeons and neurologists during recent years, brain tumor work has emerged from the chaotic state which had always surrounded it, but the real significance of these investigations is not well known. All neuro-surgeons relate the same story in regard to eight-tenths of the patients that are referred to them. These patients are usually in a deplorable condition; they are paralyzed, blind, or have other deformities, and many are in great agony. Frequently, the condition has existed for months or even years. Many brain tumor lesions are never recognized as such in private practice, and every insane asylum has its quota of inmates who harbor these tumors.

Brain tumors are probably second in frequency of all tumors of the various internal organs, being exceeded numerically only by uterine tumors. Autopsy records in numerous large European hospitals have revealed the presence of brain tumors in the proportion of one to every 60 to 100 deaths, while the ratio of operations in well known medical centers is about one brain tumor to every two hundred surgical cases.

Ten years ago, probably not over 50 or 60 per cent of the brain tumors under observation of experts could be localized, while at present, practically every tumor that produces "tumor symptoms" can be localized if properly investigated. Although physicians generally do not recognize brain tumors until they are well developed or until they present major symptoms, the time is close at hand when the early indications of their presence will be observed by all well informed physicians, and a definite diagnosis will be made in most cases long before serious impairment occurs.

The successful treatment of these lesions depends on the diagnosis being made much earlier than at present. In many cases this entails months or even years of careful observation. A small percentage of brain

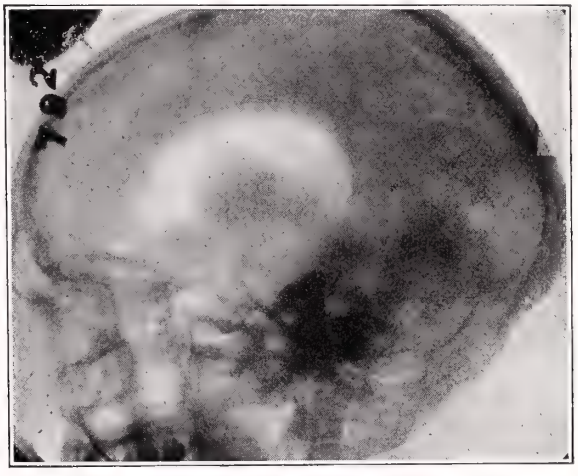

FIG. 1. Ventriculography: Tumor in left lateral ventricle originated from corpus callosum.

tumors produce focal symptoms early in their development, but the majority of them are situated in the more or less silent areas, and become localized late in the course of development by extension of the growth, or earlier by special methods of investigation. An auditory nerve tumor may present the symptoms of tinnitus, or dizziness, for a number of years before deafness, headaches and blindness result. Visual disturbances, with changes in the field of vision, usually precede the more pronounced symptoms in acromegaly. Homonomous hemianopsia, or defects in the visual fields, are usually present early in tumors which involve the temporal and occipital lobes. Visceral disturbances are evident in many cases during the early developmental stage of brain tumors, and these, along with the usual headaches, are often treated for "biliousness," indigestion, chronic appendicitis, etc. There are syndromes for various other tumor sites. Vertigo, ataxia, paresthesia, diplopia, impaired memory, aphasia, asthenia, convulsions, hiccoughs, or some other abnormal condition, is usually associated with, or occasionally precedes the onset of the headaches.

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 29, 1924.

At least 80 per cent of all brain tumors produce headaches, or pain in the head during the developmental stage, which averages about 2½ years. At times it is a dull, heavy feeling, or it may be localized, but usually the headaches come on in paroxysms of pain at intervals of days or weeks, and persist for several hours or days. Treatment by any method is often unsatisfactory. Patients frequently remember just when the tumor headache began, even though they had been troubled with headaches from other causes. Brain tumors produce headaches more readily when located in certain situations than in others, and some individuals are more susceptible to headaches, from any cause, than others. The discomfort arises from direct or indirect pressure, or stretching of the lining membranes. Young children suffer from brain tumors less than adults. The spontaneous decompression met with in pituitary tumors, at times delays or prevents headaches, while occasionally, other erosions of the cranium also lessen the discomfort.

Further investigation and verification of the early clinical symptoms of brain tumors, are greatly facilitated by frequent recourse to various means of analysis, such as the Barany vestibular tests, the quantitative field of vision tests, as perfected by Walker at the Cushing Clinic, and by the pneumoventricular tests, as developed by Dandy. Familiarity with these tests and with the different types of headache and pain in the head, with the history, and with the neurological changes that are likely to occur, as well as, with other routine procedures, are essential in order to make comparatively early diagnoses in brain tumor work.

The majority of brain tumors can be removed successfully if the attempt is made early in the developmental stage. No other tumors are so generally of a benign nature as these, but when they are "full blown," or in the terminal stage, removal is usually a hazardous undertaking. Possibly, in time, radium and the *x*-ray will be utilized to greater advantage in brain tumor work than at present. Treatment of "tumor suspects" with mercury, iodides and salvarsan, is justified in many cases, but these drugs should never be used when a definite diagnosis of operable tumor has been established.

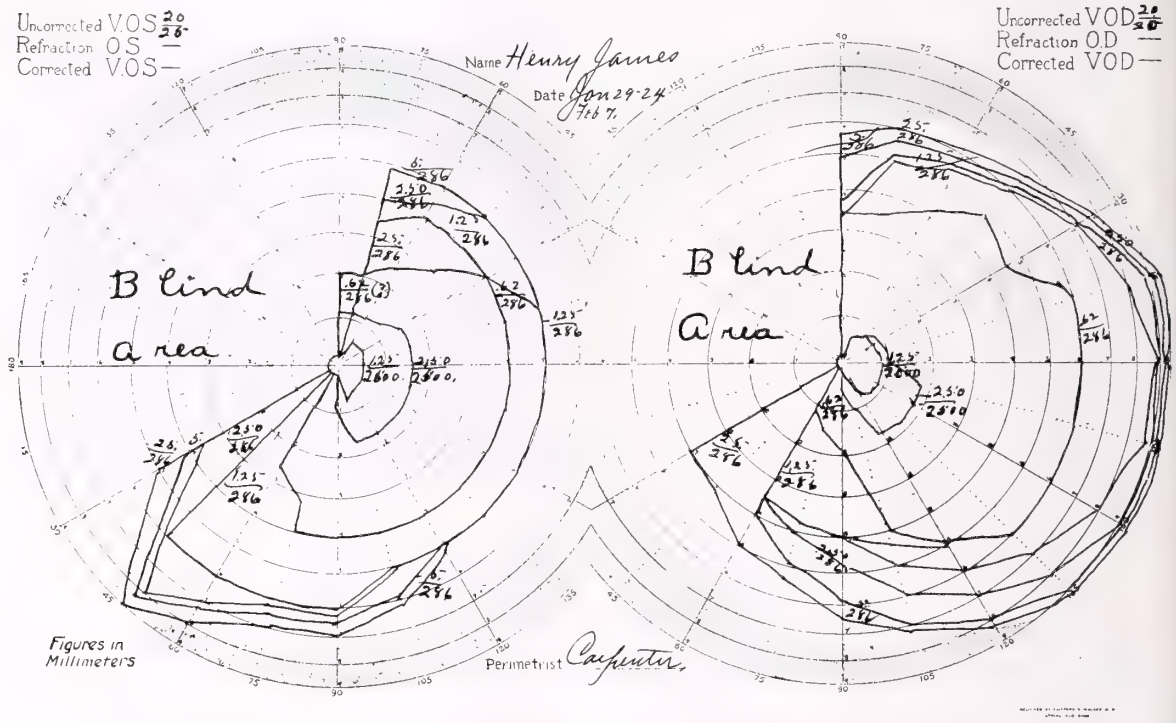

FIG. 2. Quantitative Perimetry. Blind areas reveal left side defects in each field for large test objects at 1 foot, while there is complete hemianopsia for small objects at 8 feet. Right side lesion.

SUMMARY.

1. All cases of unusual or recurring headaches, or pain in the head, should be considered "tumor suspects," until a definite diagnosis can be made. As a rule, habitual headaches and migraine, are easily excluded.

2. Frequently there are other early manifestations, such as dizziness, tinnitus, numbness, staggering, convulsions, weakness, vomiting, or some cranial nerve disturbance.

3. At present, surgery offers the only real

hope of recovery from brain tumors, and it should be resorted to as soon as a definite diagnosis can be made. In rare cases exploratory procedures are justifiable. "Full blown" tumors are removed successfully in about 30 per cent of the reported cases, but recurrences are frequent.

4. Relief from agonizing symptoms can be obtained in practically all late cases, by proper surgical measures.

always present sooner or later. They may be very slight and intermittent on first appearance.

2.—Headaches are usually diffuse, but sometimes localized (frontal or occipital), resistant to therapeutic influences (psychic and pharmacal).

3.—Other most usual symptoms with tumor above the tentorium, focal symptoms, and choked disc; tumor below the tentorium, bilateral choked discs (about 90 per cent of cerebellar tumors), focal symptoms (in tumors of pons and medulla, which often do not cause choked disc).

4 and 5.—Vertigo is valuable only as a clew—

TABLE No. 1.

EARLY SYMPTOMS IN A GROUP OF VERIFIED BRAIN TUMORS AND IN TUMOR SUSPECTS.

Duration of Headache	Duration of other Symptoms.		Location of Tumor
2 yrs.	3 mos.	Vomiting, vertigo and "biliousness."	Cerebellar. (Operation.)
2 yrs.	2 yrs.	Vomiting and "stomach disease."	Temporal lobe. (Autopsy.)
3 yrs.	3 yrs.	Vomiting and "biliousness."	Parietal lobe. (Operation.)
25 yrs.	3 yrs.	Vomiting and insanity.	Frontal lobe, right. (Air test.)
2 yrs.	15 yrs.	Tinnitus, vertigo, neuralgia, and later, deafness one ear.	Cerebellar suspect. (Auditory nerve.)
2 yrs.	2 yrs.	Facial paralysis, vomiting and weakness right arm.	Interpeduncular. (Autopsy.)
2 yrs.	2 yrs.	Vertigo, tinnitus and vomiting.	Cerebellar suspect.
3 yrs.	3 yrs.	Weak spells: (Terminal, blind, paralysis); "sunstroke."	Cerebellar. (Air test.)
1 yr.	2 yrs.	Pain in liver; hiccoughs later.	Cerebellar. (Operation.)
8 yrs.	8 yrs.	Spasm, vertigo, vomiting; head inclined to right.	Cerebellar suspect.
1 yr.	1 yr.	Stomach trouble, "gall-bladder."	Anterior lateral ventricles. (Operation.)
None	Several yrs.	Vision right eye "queer." Bitemporal hemianopsia, acromegaly.	Hypophysis.
2 yrs.	18 mos.	Vertigo, occipital pain; right-sided paresthesia.	Cerebellar suspect.
1 yr.	1 yr.	Jacksonian epilepsy, left side.	Right parietal. (Operation.)
1½ yrs.	2 yrs.	Paresthesia nose and eyes, weak vision, bitemporal changes in field.	Hypophysis suspect.
3 yrs.	2 yrs.	Diplopia; strabismus at times; deafness one ear.	Middle fossa. (Operation.)
3 yrs.	2 yrs.	Spasms, impaired hearing.	Cyst parietal lobe. (Operation.)
2 yrs.	6 yrs.	Numbness one side; later, vertigo, ataxia; deafness, left.	Posterior fossa. (Operation); abscess.
2 yrs.	4 mos.	Jacksonian convulsions, left.	Anterior lateral ventricle, right (Autopsy).
12 yrs.	10 yrs.	Convulsions; later, homonomous field defects.	Temporal lobe (almost certain).
3 yrs.	6 mos.	Weakness, unconscious spells, "hysteria."	Temporal lobe, right. (Autopsy.)
8 mos.	5 mos.	Vomiting, unconscious spells, bilateral jerking arms.	Septumpellucidum. (Autopsy.)

Table No. 1 indicates symptoms preceding stage at which a diagnosis of brain tumor was made, usually before poor vision, blindness, coma, paralysis, incontinence, etc., came on. Analysis of many cases reveals average duration of headaches and other early indications to be about two and one-half years before the more serious symptoms appear, although unusual periods of from six months to many years are met with occasionally.

QUESTIONNAIRE ON EARLY INDICATIONS OF BRAIN TUMORS WITHOUT FOCAL MANIFESTATIONS.

1.—In what percentage of patients do you consider headache, or pain in the head, the primary symptom of brain tumor?

2.—Are the headaches more or less characteristic?

3.—What is the other most usual symptom (alone, or in connection with headaches) in early brain tumors, above the tentorium, and below the tentorium?

4.—As an early symptom, does vertigo occur more frequently in tumors above or below the tentorium?

5.—Do you consider vertigo an important symptom in the early diagnosis of brain tumors?

6.—Has pneumo-ventriculography enabled you to make localization of brain tumors before focal symptoms occurred or before gross changes occurred in the eye-ground?

7.—Are major operative procedures justifiable at present on patients who, in your opinion, have tumors, but who have no definite localization symptoms, and no gross changes in the eye-ground?

REPLIES.

Lewellys F. Barker, Baltimore. "1.—Headaches are often absent at first, but they are practically making thorough diagnostic study necessary; vertigo more frequently occurs in the absence of tumor than with tumor.

6.—Only small experience with pneumo-ventriculography; it is really valuable for more exact localization in many cases. Brain tumor is always suspected before resorting to this test.

7.—Major operations are not justifiable on tumor suspects, with no definite focal symptoms and no gross changes in the eye-ground."

A. W. Adson, Mayo Clinic: "The consideration of early symptoms in brain tumors is well worth while. We have not had opportunity to make a statistical study of the question. The mortality from ventriculography has been high in our clinic, about ten per cent, and it is particularly dangerous in brain-stem and cerebellar lesions, but it is a valuable procedure in selected cases."

Richard C. Cabot, Boston: "I should not want to express any opinion off hand, in relation to the relative frequency of headaches and other symptoms in brain tumors. As a careful statistical study is beyond the time I have to give, I am unwilling to make any guesses in the matter."

Charles H. Frazier, Philadelphia: "In a general way, I should say that in possibly two-thirds of the

cases headache is one of the first symptoms. It is quite characteristic, as you know, coming chiefly in the morning, frontal or occipital in type, and usually associated with vomiting.

"Vertigo, of course, is more common in tumors below the tentorium. However, it is not a symptom to which I attach very much importance. In regard to ventriculography, we are able to localize tumors in 70 per cent of cases by neurological examination. In a portion of the balance of cases, the ventriculogram is helpful. Of course, no one should consider an operation on a patient in whom a tumor has not been localized, and in the absence of any pressure symptoms."

Ernest Sachs, St. Louis: "1.—Headache, or pain in the head, is a primary symptom in fully 80 per cent.

2.—Only rarely are the headaches characteristic. Posterior fossa tumors usually cause headaches in the frontal region; pituitary tumors frequently bitemporal.

3.—Another most usual symptom with tumor above the tentorium, is dimness of vision or double vision; with tumor below the tentorium, staggering gait, or vomiting.

4 and 5.—Vertigo occurs more frequently in tumors below the tentorium, and it is not an important early symptom.

6.—Pneumo-ventriculography has very rarely enabled me to localize brain tumors before focal symptoms or gross changes occurred in the eye-ground.

7.—Major operative procedures are justifiable at times on tumor suspects without definite localization symptoms and with no gross changes in the eye-ground."

Hugh Patrick, Chicago: "1.—Do not know the percentage of headaches, but it is frequently the first symptom.

2.—It is not characteristic in the beginning, except that it is a headache that 'hurts' (all headaches do not hurt).

3.—Dizziness is the next most usual symptom when tumor is below the tentorium; nystagmus and cerebellar gait are also frequent.

4.—Vertigo is most frequent with tumors below the tentorium.

5.—Vertigo is an important symptom when present, but is usually absent.

6.—Have not used pneumo-ventriculography, but from careful consideration of the work of others think it *occasionally* makes localization of the neurological examination adequate.

7.—Major operations, such as subtemporal and suboccipital decompressions, are justifiable on tumor suspects, at times."

Allen Starr, New York City: "1.—Headaches occur in almost every case.

2.—Headaches are very severe, are continuous, and are increased by physical or mental effort or by coughing.

3.—Other most usual symptoms of tumor above the tentorium, are localized symptoms, spasms, paresthesia, blindness; of tumor below the tentorium are, vertigo and choked disc.

4.—Vertigo occurs more frequently with tumors below the tentorium.

5.—Vertigo is an important symptom in brain tumors.

6.—Ventriculography has not enabled me to make early diagnosis.

7.—Major operative procedure is not justifiable without definite localization in tumor suspects."

Harvey Cushing, Boston: "1.—Your questions should be answered by careful statistical study of several hundred cases. Headaches are common, but many people with tumors recover from their headaches entirely, and some with very large tumors may never have had any headaches at all.

3.—Primary symptoms in some cases may be nausea and vomiting, and patients are often treated for long periods on the supposition of some gastro-intestinal trouble. Tumors of different kinds, in different situations, and at different ages, behave in very different ways. Could make a definite reply as to the preliminary symptoms, of an acoustic neurinoma, a pituitary adenoma, a parasagittal meningioma or, indeed, a number of other kinds of tumors.

6.—Pneumo-ventriculography is not a procedure to be undertaken lightly. It has almost as high a mortality in the hands of some operators as actual operations on brain tumors should have. The test should never be attempted under any circumstances except by the surgeon who is capable of immediately undertaking an operation, should one be indicated.

7.—A conservative answer as to operation on tumor suspects would be difficult to give. A patient with no evidence of intracranial tension, as shown in the eye-grounds, would hardly come under the suspicion of harbouring a tumor, unless there were some localizing symptoms."

W. E. Dandy, Baltimore: "1.—Probably headaches occur as the primary symptom in from 60 to 70 per cent of cases.

2.—They are fairly characteristic, constant in position, generally increase in severity, and often associated with nausea or vomitting.

3.—Localizing signs above the tentorium, none except focal; below the tentorium, staggering gait occurs most frequently in connection with headaches.

4.—Vertigo occurs most frequently with tumors below the tentorium, but it also occurs many times with those above; vertigo is not an important symptom.

6.—Have made localization of many brain tumors by the use of pneumoventriculography before focal symptoms occurred, or before gross changes occurred in the eye-ground.

7.—Localization by focal symptoms or by tests must always precede any operative treatment."

ABSTRACT OF DISCUSSION.

Dr. C. C. Nash, Dallas: I am more or less in close touch with Dr. Carpenter's work and have assisted him in several cases. I believe that most brain tumor operations can and should be done under local anesthesia. You will be surprised to see what can be accomplished in brain cases by this method. A preliminary injection of from one-fourth to one-half grain of morphia is given one hour before operation, and then novocain, one-half of one per cent, is infiltrated into the skin along the proposed line of incision and a few cc. deposited beneath the scalp, underneath this line, or better, where the large sensory nerves enter the scalp. We have repeatedly shown that the dura is insensitive to pain unless pulled upon, when the patient usually complains of headache.

Gastro-intestinal symptoms are very common, and I believe that every chronic case of indigestion, vomiting, etc., in which there is complaint of headache, should have a very careful neurological examination, to eliminate tumor. A case in mind is that of a patient with a large cerebellar cyst, whose chief complaint was vomiting, and who had had so many fluoroscopic examinations that he had two large *x*-ray burns on the abdomen.

Doctor Carpenter (closing): Possibly I was misunderstood. I said that any *unusual* headache that recurs and cannot be accounted for, should arouse a suspicion of brain tumor, as that is the way they

usually begin, and until we do assume this attitude towards these headaches, we will never make any headway in the early diagnosis of brain tumors.

The Dandy air test is invaluable but dangerous, even in experienced hands. Deaths occurred last year from the test in some of the large clinics in over 10 per cent of the cases. However, localization can be made with it, at times, when all other methods fail. In 30 cases, I have had only one death, and I depend on it more than anything else in early or late *obscure* cases.

THE SURGICAL TREATMENT OF PERSISTENT HEADACHE DUE TO UNRESOLVED CEREBRAL CONTUSIONS.*

BY

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This subject is suggested in consideration of the fact that from time to time, an appreciable number of patients suffering from persistent headaches present themselves for surgical treatment. Such patients usually consult the surgeon as the last resort, they having gone the rounds of the various other medical specialists. I entertain no thought of proposing anything new in surgical technique, or any innovations in clinical diagnosis, but rather propose to discuss the indications and contraindications for decompression and other surgical procedures, based upon the clinical symptomatology, as presented by persistent headaches following cranial injuries, and to briefly discuss the pathology of unresolved cerebral contusions. There is a scarcity of literature on this subject, and authentic references are few. Therefore, I must stand sponsor for the greater part of my assertions.

It is well known that certain remote effects result from cranial injuries, depending upon the nature and extent of the lesion for their severity and duration, such effects being characterized by very definite symptoms, of which symptoms headache of a persistent or continuous nature is the most outstanding. These remote effects, observed months and oftentimes years after the injury, are vertigo, nausea, attacks of vomiting, mental depression, melancholia, insomnia, marked irritability and, occasionally, insanity or acute mania, headache being associated with each or all of them. Headache of a type which is never quite easy, except as influenced by drugs, and which becomes more intense with each acute exacerbation. This is the type of which I speak, and which I will describe more particularly later on, its interpretation being dependent upon exclusion of headaches due to other causes, and upon a comprehensive study of the cerebral injury with its resulting pathology.

To describe just what is meant by unresolved cerebral contusions is a bit tedious. Formerly the term "concussion of the brain" was used to describe the condition present in head injuries accompanied by a period of unconsciousness, a term without meaning from a pathological standpoint. We now use the word "contusion," because even in the mildest cases of what we formerly called concussion of the brain, there are lacerations, small hemorrhagic areas and multiple points of bruised brain tissue. It must also be remembered that a contused brain is at a very great disadvantage as compared with any other organ of the body. Brain tissue must follow the same law of resolution as other tissue. Following contusion, the brain is deprived of oxygen. All tissues when deprived of the normal amount of oxygen become edematous, which process is compensatory, permitting reoxidation and hastening resolution. But the brain when contused can become edematous only to a very limited extent, because of its incasement in a nonelastic capsule and a non-expansive bony vault, unless a decompression has been done. Consequently, resolution is interfered with. In other words, there is an embarrassment to the absorption of extravasated matter and an indefinite delay to recovery. As long as this condition continues, the intracranial space is so encroached upon that there is less than the usual space for the normal movements of the brain, corresponding with arterial pulsations and respiratory movements. It also interferes with normal circulation and the interruption of sensory and motor impulses from the cortex through the fibre tracts. This interference with the circulation, and normal movement of the brain; the encroachment upon the normal intracranial space, with the consequent impingement of the arachnoid and the interruption of fible tracts and destruction of the cortex cells, etc., all tend to bring about persistent headaches.

The skull is capable of being considerably inbent and of recovering its shape without fracture. A blow on the head may cause marked contusion of the brain tissue without leaving any evidence of fracture. Therefore, it must follow that while a fracture shows that the skull has been inbent beyond its limit of elasticity, the absence of a fracture does not show that there has been no contusion of the brain tissue. This fact must be kept in mind in considering headaches thought to be due to unresolved brain lesions. There may be no deformity, and the stereo-roentgenogram may show a perfect skull, and yet there

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may remain just as pronounced evidence of brain contusion as may be found in cases of deformity from fracture. It is most important that the loss of consciousness at the time of injury be kept in mind. It must be understood that even a very brief period of unconsciousness is indicative of anemia of the whole cerebrum, and this can be due only to a sudden and great increase in the general intracranial tension. Such unconsciousness deepens with an increase of intracranial pressure, and likewise subsides with its subsidence.

We have always regarded stationary paralytic symptoms as being due to destruction of the brain tissue at the time of the injury. This is unusually true, but it may not be so in all cases. In many cases of paralysis following brain injuries where no improvement, or only slight improvement results, the condition is kept up largely by an unresolved cerebral contusion, and can be improved, if not entirely relieved, by a decompression operation.

Headache of a chronic or persistent nature is the characteristic symptom of unresolved cerebral contusions. Headaches due to the above cause and of the above stated nature, are not difficult to differentiate from headaches due to other causes. It has paroxysmal exacerbations of marked intensity, unlike any other headache. The patient is practically an invalid; is never quite easy, but at times able to carry on, but always with periods of complete disability. The headache is at times of such intensity as to upset the mental equilibrium of the patient. It is of a throbbing bursting nature, and is aggravated by physical exertion or mental excitement. The sufferer is irritable and resentful, and may become violent upon the least provocation. This class of patients, if not relieved, are very apt to become drug addicts or to be condemned by loving friends as insane and sent to some institution for mental and physical wrecks. Headache of the contusion type may occur after either a mild or a severe head injury. But it has been noted that it does not so often occur after a severe head injury where a decompression has been done, for the reason that by virtue of the decompression operation the brain has a chance to undergo resolution. Following minor head injuries, the true cause of the headache is often overlooked. Injuries producing local contusions do not cause persistent headache until the patient has recovered from his injury and is up and about his business, while headache from a general or widespread contusion is usually severe from the time that the patient regains consciousness; that is, in the nonoperated cases.

Local contusions causing persistent headache demand operative treatment. Such operations are usually very successful, provided there is free exposure of the contused area by decompression and that correct after treatment is carried out. A free opening allows resolution to take place from two to four months. The opening may be closed by transplantation of bone from the tibia or ilium.

The same types of headache following the widespread or so-called general contusions, are best treated by prolonged rest and absolute quiet. If not relieved thereby, a single or double temporal decompression is indicated. A large majority of such cases respond satisfactorily to this treatment.

REFERENCES.

U. S. War Department Neurosurgical Manual, Vols. i and ii.
British Surgical History of the War, Vol. i.

ABSTRACT OF DISCUSSION.

Dr. C. S. Venable, San Antonio: In early cases I think Dr. Crosthwait's position well taken, but cannot concur in his procedure in later cases, especially when intraventricular circulation is obstructed. Indications must be definite before operation is resorted to in these cases. Persistent headache is an indication of some pathology being present.

Dr. E. R. Carpenter, Dallas: The treatment of persistent headache due to unresolved cerebral contusions, like all other conditions, depends on a definite diagnosis, and often it is difficult to say just what conditions we are dealing with in headache after head injuries. Personally, I seldom know whether the headache is due to edema, abscess, cyst, or something else. The eye-ground is not always of value. Lumbar puncture is likely to be more dependable in such cases, and often this alone is all that is necessary in a surgical way. Where edema persists, magnesium sulphate by rectum, or an intravenous hypertonic salt solution, frequently acts as well or better than decompression. In fact, decompression has a very limited field in this class of cases. As a rule, a bone flap is to be preferred, because the condition can be recognized accurately and and proper surgical relief obtained. I do not believe major surgical procedures should be employed unless absolutely indicated, and localization is fairly certain.

In regard to spinal drainage, 30 or 40 cc. or more of spinal fluid can be removed with safety, in many cases, after injury when the pressure is high. I have removed 4 ounces or more fluid from the ventricles without replacing it with air, and without injury. However, the fluid should always be removed slowly, by lumbar puncture, and with a small flexible needle. Respiratory disturbance from lumbar puncture is less likely to occur after late head injury than where a brain tumor is present.

Dr. W. L. Brown, El Paso: I would think it highly desirable to first determine by means of the spinal manometer, whether or not there is actually an increased intracranial pressure before undertaking any decompression operation. An increased spinal pressure, for example, 16 mm. would certainly be too high, and would be an important point. I think the intracranial pressure should be determined in this way, as such an increase is often indicated before there are any changes in the eye-grounds.

Dr. T. C. Gilbert, Dallas: There are, perhaps, cases in which a decompression operation may be required

for relief; but it would seem a dangerous teaching to recommend decompression in all of these cases. The fact that many of these patients can be relieved by repeated spinal puncture, with the aid of the spinal manometer, makes one feel that Dr. Crosthwait should qualify his recommendations, and that he should exhaust the simple measures at his disposal before resorting to such a radical operation as decompression.

Following the teaching of Sharpe, I have treated some of these cases with good results, and it is my opinion that lumbar puncture should always be given a trial. It is a simple procedure, and can be followed by any physician, and if done by the method of Sharpe, it is not dangerous.

Dr. Crosthwait (closing): I appreciate the free discussion and am not surprised at some one taking issue with me on some of my statements. I repeat that decompression is not indicated in all of these cases. We are dealing with cortical pathology. Lumbar puncture will not suffice when the headache still persists. I have been impressed with the finding of pathology when persistent headache was the most important symptom.

THE PSYCHIC FACTOR IN THE TREATMENT OF PULMONARY TUBERCULOSIS.*

BY

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Psychotherapy is an integral part of medicine. It belongs as much to medicine as the administration of drugs and the use of the surgeon's knife. The treatment of all diseases, whether we recognize it or not, has a psychic aspect. In pulmonary tuberculosis more than in any chronic disease which the medical profession is called upon to combat, the great importance of the psychic factor must never be neglected.

The relation between the physical and the psychic, the intimate reactions of the body upon the mind, and, conversely, of the mind upon the body, the far-reaching effects which the mental state will have upon the course and final outcome of the tuberculous infection, are important factors that must be as carefully considered by the physician in attendance, as the temperature curve or the bacteriological findings, and they will inevitably prove to be as important. More than this, so great is the bearing of the psychic factor upon the entire course of the disease that in making the prognosis, the patient's mental state is nearly as important as the condition of his lungs. Nearly every tuberculous patient is burdened with some mental ailment, or "something on his mind," and the physician who undertakes to treat tuberculosis—whether in the course of general practice, or by specializing in the study of this one ailment—can never hope to attain success unless he possesses infinite patience, and a certain amount of skill in psychoanalysis, and the handling of various neuropathies which we usually regard as the peculiar field of the alienist and neurologist.

Naturally, the physician feels a certain reluctance to pry into the private affairs of his patient, especially one who comes to him for the first time. Most of us who are called upon to diagnose and treat pulmonary tuberculosis, see the patient for the first time when the disease has already laid its dread hand upon him, and when doctor and patient meet as strangers, the psychic approach is rendered much more difficult. The family history is usually easy enough to obtain, and if the patient is of the expansive and complaining type, we may often get a good insight into certain of the psychic influences which surround him in his daily life. But this is largely a matter of chance, and the physician must make it the aim of his inquiry to obtain a good understanding of the personality presented to him, with the same degree of thoroughness that he would percuss the chest, or auscultate the heart.

In treating tuberculosis, then, the physician should have a fair knowledge of psychoanalysis. This is true, no matter how lightly he may esteem the doctrines of Freud, or how far from his field of labor he may believe psychiatry to be. The first interview with the patient is a very important occasion for all concerned, for it is then the physician must lay the foundation of that perfect understanding without which he can do little to aid the sufferer in his struggle to regain his health. In the first place, the patient must be impressed with the physician's genuine interest in him, and must be made to understand that complete coöperation is necessary, if favorable results are to be expected, and that success depends upon absolute obedience and a willingness to be subservient to discipline, no matter how irksome. The true state of affairs, should be laid before him without prevarication or concealment, but this does not mean that he is to be "scared out of his wits." He should be impressed with the gravity of his condition, but he should also be imbued with hope, and told how faithful coöperation will bring favorable results in a large proportion of cases.

The personality of the physician has much to do with his success in gaining his patient's confidence, and in establishing that relation of esteem, and if possible affection, which will make obedience to orders a pleasure instead of a burden. This is especially true of him who undertakes to direct sanatorium treatment, for it is under these conditions that

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the psychic factor of tuberculosis therapy becomes of paramount importance. When the treatment is to be undertaken at home, an entirely different set of conditions is to be met, and it becomes necessary for the physician to acquaint himself with his patient's reactions to his surroundings, and to secure not only his coöperation, but the coöperation of all the members of his household. All of this will take an infinite amount of time, tact and patience, but upon it rests, in the last analysis, the entire measure of the success or failure of tuberculosis therapy.

A great deal has been written concerning the psychology of the tuberculous patient. The relation between tuberculosis and insanity has been minutely studied, and many authoritative writers assert that there is a definite tuberculous psyche, a neurasthenia directly due to the action of the toxins generated in the body by the presence of the tubercle bacilli.

Fishberg,[1] of New York, has written extensively along this line. He claims that:

"The greatest majority of tuberculosis victims of either sex, with the onset of the disease, and often even before we can discern the physical conditions with the means at our command at present, show a remarkable change in their mental traits and character, a disturbance in their emotional life, and a striking divergence from their previous habits, customs, affections and tastes. These changes in the characteristic frame of mind and disposition of the consumptive have been observed throughout the course of the disease, ameliorating as a rule, with every improvement in his condition, and are aggravated with each exacerbation."

Jessen[2] believes that this mental state consists essentially in a defective equilibrium in the mental and emotional state of the patient. Stimuli which do not disturb the normal and healthy brain are sufficient to derange the central nervous system, which is affected by the toxemia of tuberculosis. His judgment is weak and defective, as is evident from his well known optimism, and the state of mind by which he is so often self-deceived in regard to his condition.

Engel[3] believes that the original, innate temperament of the individual is, in the chronic consumptive, simply more definitely pronounced. The naturally pessimistic individual becomes markedly despondent, the optimist is hopeful beyond all the dictates of reason and common sense. These phenomena are explained by this author as the result of a discordance between the subjective feelings of the patient, especially one who is not yet disabled by the disease, and the report of his physical condition made by the physician. The mental attitude of the individual depends largely upon his physical condition, which in tuberculosis is subject to frequent variations, exacerbations and apparent improvement, in rapid alternation. While the basic mental traits do not change, original characteristics which have been suppressed by training and the necessities of adjustment to human social relations, are released and rise to the surface when the restrictions of such adjustment are relaxed. A gradual loss of will-power unmasks the concealed elements of character.

In my personal experience, I have met characters of every sort among those afflicted with tuberculosis, and I can only agree with those who say that the effect of infection by tuberculosis is to bring out in the afflicted individual's character those traits which are the most fundamental, no matter how deeply buried they may be under the accumulated conventions and restraints forced upon him by economic and social requirements.

The physician who recognizes this fact, can often overcome the evil tendencies by wise stimulation of those inhibitory influences which the consumptive is too often permitted to neglect, and which have remained submerged while the patient enjoyed his full measure of health and well being. The accomplishment of such a purpose is one of the rewards which come to him who gives proper attention to the psychic therapy of tuberculosis, because psychotherapy can be directed toward any important function of the body, or abnormal habit of thought. Perhaps to no other physician is it given in equal measure to be the "guide, philosopher and friend" of his patients, and no other physician has such an opportunity to bring forth the best that is in his patients to meet whatever fortune lies in store for them.

ABSTRACT OF DISCUSSION.

Dr. J. W. Laws, El Paso: The psychic element in the treatment of any disease is a greater factor in the management and cure of the patient than most physicians realize, and psychotherapy is unconsciously utilized by every successful and popular physician. This is voiced by the laity when they say that when sick, confidence in the doctor is half the battle.

This is particularly true of tuberculosis, an essentially chronic disease with acute manifestations, lasting over a long period of time. There was a time in the history of medicine when a shroud of mystery surrounded the doctor and the drugs that were administered, but with the present education of the public by the medical profession, the patient either knows or is told by the honest physician, that there is no known specific for the cure of tuberculosis. Therefore, the degree of success to be obtained by the physician in the management and treatment of tuberculosis will in a large degree be proportionate

1. Fishberg, M.: "The Psychology of the Consumptive," Med. Record, April 16, 1910.
2. Jessen, F.: Lungenschwindsucht und Nervensystem, Jena., G. Fischer, 1905.
3. Engel, H.: "Ueber den Einflus Chronischer Lungentuberkulose auf Psyche und Nerven," Munch. Med. Woch., Nos. 33 and 34, 1902.

to his ability to tactfully and skillfully apply psychotherapy.

To be able to influence the tuberculous to accept their affliction cheerfully, without bitterness and resentment, to hopefully adopt measures of supervision and restriction, to willingly change their active lives to inactivity and self-sacrifice, is worthy of the patient endeavor of the physician who treats tuberculosis.

From the very first time the doctor sees and examines the patient, he not only studies and notes the gross pathology in that particular patient, but begins to receive impressions of the nervous temperament of his patient and begins "to tune in" with the patient's individual needs. If he is to obtain the coöperation of the patient, he must of necessity be honest as to the diagnosis, prognosis, the length of time of treatment, and the life to be followed after the trouble becomes quiescent. The hopeful side, of course, will be stressed, but the probability that there may be flareups of activity and complications, must not be omitted. The patient must be impressed with the fact that a great deal depends upon his coöperation and determination to do his part in the fight for recovery. All this cannot be done at one time, but the patient must be gradually educated as to his own particular disease and the amount of gradual resistance it will be possible to build up to ultimately overcome the trouble.

RHEUMATISM.*

BY

J. H. McCRACKEN, M. D.

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I read a paper on rheumatism before this Association in 1902. I took the position that rheumatism was a disease *per se,* and that a micro-organism was the cause. I directed attention to the fact that Sucotello, in 1892, discovered an anaerobic bacillus which he thought was the cause of rheumatism; that in 1897, Thireloix confirmed Sucotello's findings, and that his bacillus was the same as Alchalme's, and was probably the true bacillus of rheumatism.

Dr. Barker reports, that in his laboratories up to 1913, they had been unable to produce the germ from culture, but he says that Poynton and Payne of London, had found a diplococcus in the blood. He also says that Dr. Rosenow has isolated the streptococci from tonsils, joints and regionary lymph glands, and can convert these streptococci into hemolytic streptococci on the one hand, and into pneumococci on the other. On animal inoculations these cocci give rise to polyarthritis, myocarditis and myositis.

Rosenow had found, in his studies on transmutation of pneumococci, that oxygen played an important role in bringing about changes in these organisms. It has occurred to him that bacteria in rheumatic cases might be exceedingly sensitive to oxygen, and that the negative cultures in acute rheumatism might be due to lack of proper oxygen tension in the culture medium. He devised a technic by which he could have, in the same tube, aerobic and anaerobic conditions. By this method Rosenow obtained, in acute rheumatism, pure cultures of streptococci from the joint fluids in 16 out of 19 non-fatal cases, and from the blood in 5 out of 8 cases. He has since proved that these particular types of streptococci are anaerobic, and that they grow only slightly when thoroughly exposed to oxygen.

These strains of streptococci differ in some respects from the *streptococcus viridans* and the *streptococcus hemolyticus.* They vary in virulence, produce much acid in media containing dextrose, and tend to change in their properties on cultivation. They grow better than ordinary streptococci at low temperatures, and are more virulent for frogs than either the pneumococcus or ordinary streptococcus. Injected into rabbits and dogs, they exhibit not only an affinity simultaneously for the several serous membranes (endocardium, pericardium and joint membranes), but also a tendency to localize, in the experimental animals, at sites corresponding to those of the lesions in the human, from which they were isolated.

Rosenow believes that oxygenation of the streptococci converts them into the particular type which produces rheumatism. This carries out my original idea, that rheumatism was due to a specific micro-organism. While the question is not definitely settled yet, all late research points to a specific germ as the cause of this disease.

I said in my other paper that there was a relationship between rheumatism, rheumatoid arthritis, gout and sciatica, and that the difference in type was due to the virulence of the micro-organism. With the exception of arthritis deformans, that idea very nearly corresponds to the researches up to date. The theory has become prevalent that there is no such disease as rheumatism, that a focus of infection somewhere in the body is responsible for the inflamed and swollen joints, shifting muscular pains, high fever and sour sweats.

Drs. Rosenow and Winifred Ashby of Rochester, Minnesota, in a personal communication, have reported many cases of infection in the tonsils, teeth, etc., resulting in myositis, neuritis and joint involvements. Out of 28 cases reported in one series, all except 3 showed focal infection. Of the three which did not show focal infection, two gave histories of having had tonsillitis, and one nasopharyngitis. On cultivation of the pus or secretions taken from the 25 cases, they found the hemolyzing and the green-producing streptococci. These were injected

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into animals, and reproduced lesions and symptoms similar to those of the patients from whom they were taken.

I believe that they have discovered the cause of rheumatism, and that these streptococci are virulent only when produced by the anaerobic process. As further proof, I cite their experiment. Cultures were made from single colonies, taken from aerobic blood-agar plates seeded with tonsillar pus cultures of the patient. Hemolytic and green-producing streptococci were used. Animals injected with these cultures gave negative results. This bears out the general finding that not every streptococcus will cause muscle lesions, and that the streptococcus which causes these lesions either does not grow, or loses its peculiar infecting property when grown on aerobic blood-agar plates.

That pus infection gives rheumatic pains, etc., I do not deny, but I still insist that rheumatism is a separate and distinct disease, possibly due to anaerobic streptococci, and that it responds to specific treatment, which treatment is not of any special value in other types of streptococcic infection, such as puerperal septicemia and erysipelas.

McKenzie says that in rheumatism in adults, the heart is involved in 34 3/10 per cent of the cases, and in children, from 60 to 80 per cent. Cabot reports 600 cases of fatal heart disease, 270 of which were traceable to rheumatism. It has been suggested that because the endocrines are defective in children, they suffer heart complications more often than adults. Is there any other disease, of whatever nature, that gives such a percentage of heart complications? Is there any other disease that has that characteristic sour sweat? If not, then I again insist that this condition is rheumatism, and is as distinct as any other disease.

I believe that the acute type often becomes chronic; that one can have the chronic type without ever having had the acute, and that the chronic is due to the attenuation of the micro-organism, or to the patient's powers of resistance. A comparison between malaria and rheumatism proves this point. In malaria there are the acute and chronic types, yet both have the malarial plasmodium as a cause. So in rheumatism, there are the acute and chronic forms, due to the same micro-organisms, be it the peculiar type of streptococcus described, or what not.

The fact remains that there is a disease named rheumatism. I have lived in Mineral Wells many years, and have successfully treated hundreds of cases of rheumatism. Rheumatoid arthritis, which I classed in my other paper as possibly rheumatism, I now leave out of the classification, but I will say that these patients are greatly benefited by treatment at the Wells.

My treatment for acute rheumatism is to primarily remove all foci of infection, and give sodium salicylate in twenty grain doses, acetate of potassium in fifteen grain doses, and tincture of aconite in pretty full doses, until the fever subsides. Then I leave off the aconite and continue the other remedies until the patient has recovered. I give this combination in plenty of water every two, three or four hours, as is necessary to control the pain. After the fever and pain are relieved, I give the combination three or four times a day for a week or ten days; in all, the treatment covering about four weeks. I believe the salicylate of soda is as nearly a specific for rheumatism as quinine is for malaria, and that the treatment should be kept up for practically the same length of time, to prevent reinfection and a return of the symptoms. After the acute symptoms have subsided, I give the iodides, to absorb the exudates which the disease often leaves as sequelae. In the chronic cases, iodides are given with the salicylates.

Some may question the propriety of giving the aconite. I claim credit for the original idea of giving aconite in these cases; at least, I had never heard of the treatment before. Later I saw where some physician in the East recommended aconite, and gave the same reasons for its use that I did, namely, that it reduces the fever and inflammation, lowers the arterial tension and slows the heart's action, thereby lessening the danger of complications.

In support of this contention, I may say that I have never had any heart complications which did not get well, when I have had the case early and the treatment was carried out according to instructions. Living in Mineral Wells, where there is saline-alkaline mineral water which is a good eliminant, I give it in conjunction with the above treatment, and have found it a great aid. In fact, I attribute to this water much of my success in the treatment of this disease. I give the water as freely as the patient's bowels will stand, which is from three to five bowel movements daily. This is done for two reasons: first, for the elimination; second, to alkalinize the blood, which requires from eight to twelve glasses of water per day. These waters are of different strength, hence if the patient's bowels are sensitive, I advise the well which is best suited to the case. In addition to this, I prescribe sweat-baths, either at home or at the bath houses, and in chronic cases, massage. Electricity and light modifies the pain and promotes absorption. Static and gal-

vanic electricity have given me the best of results.

ABSTRACT OF DISCUSSION.

Dr. L. W. Fetzer, Dallas: There is a question whether the specific cause of rheumatism has been been discovered. Formerly, it was considered a constitutional disease. Now it is considered an infection. Later, it may be grouped otherwise. The keynote of Rosenow's work may be transmutation, and yet all of this work does not mean that a specific organism may not be the cause of rheumatism.

The question of acid production is of importance. Various acids have been found in the blood, and sweat of these patients. Any condition causing lessened oxygenation increases the production of acid. It is doubtful whether a relationship exists between gout and rheumatism. The use of aconite in rheumatism is not new, and is a matter of record.

Dr. Ben H. Turner, Cleburne: I wish to report a case of acute rheumatism that completely recovered after the use of 20 grains of sodium salicylate and sodium iodid intravenously. These medicines should not be given by mouth, because they upset the stomach and interfere with nutrition.

Dr. W. A. Wood, Waco: In reply to Dr. McCracken, I might casually remark that "free off hand your story tell when with a bosom crony, but keep a little back, you would scarce tell to ony." Dr. McCracken is from Mineral Wells, where they use water internally, externally and eternally, and he, under such environments, may be able to give his patients twenty grains of salicylate of soda every three hours for weeks at a time, but in Waco I can't; they balk on me. I upset their stomachs and they refuse. I was delighted to hear Dr. Turner suggest the use of sodium salicylate intravenously. I think this method of medication gives promise in the use of salicylates.

Dr. J. H. McCracken (closing): There are only two points I wish to emphasize: (1) Rheumatism is due to a specific micro-organism, which Rosenow and others have, perhaps, isolated. It is a streptococcus of the viridans or hemolytic type, which, to be virulent, must be grown anaerobically. These cocci cultivated aerobically will not produce rheumatism. (2) The copious use of water is essential in the treatment, as it facilitates elimination, and protects the stomach against the deleterious effect of the salicylates.

ADENOIDS.*

BY

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It was fortunate for mankind when William Meyer, in 1870, discovered the pathologic role of the adenoids; but unfortunately for the then rising generation, his findings were not accredited by the medical profession. It has taken forty years for the medical profession as a whole to appreciate the pathology of adenoids.

In the newborn child the lymphatic glands in the nasopharyngeal space serve the purpose of warming and moistening the inspired air and of ridding it of dust particles and bacteria. These superficially placed lymph glands serve a very useful purpose until the inferior and middle turbinates develop and assume that function, when Luscha's tonsil disappears. Upon timely involution and disappearance of Luscha's tonsil, depends the development of the nasal chambers, turbinates, maxillary and sphenoidal sinuses and the anterior and posterior ethmoidal cells. Upon a normal development of the nasal chambers and turbinates depends the development of the entire respiratory tract; upon a normal development of the maxillary sinuses depends the spacing of the teeth, the arch of the palate, and the beauty and symmetry of the face, and upon a normal development of the ethmoidal and sphenoidal sinuses depends the development of the base of the brain and normal cerebral growth.

Hypertrophy or hyperplasia of Luscha's tonsil, results from oft-repeated, acute inflammatory attacks occasioned by the exanthemata, grippe, infectious fevers, bronchitis and rhinitis, or from chronic inflammatory changes due to unhygienic home and school surroundings, plus heredity and climate. The inflammation of Luscha's tonsil in the infant is manifested by a rise of temperature, snuffling, inability to nurse for any length of time, and irritability and restlessness in sleep, as the little fellow has not learned to breath through the mouth and will frequently awake during the night and spend the time crying. Then the mother consults the physician about the baby's cold. In these cases search should always be made for the chain of lymphatic glands behind the sternomastoid muscle, as these glands drain the epipharyngeal space and, if enlarged, a diagnosis of an infection of Luscha's tonsil may be made with a considerable degree of certainty. And if the chain in front of the sternomastoid is enlarged, a complication of an infected faucial tonsil may be safely assumed. In these cases the middle ear is frequently invaded, resulting in suppurative otitis media and perforation of the drum membrane, or in a dry catarrh of the middle ear and retraction of the drum head, when the mouth of the eustachian tube is obstructed, which leads to greatly impaired hearing or to deaf-mutism, as it has been shown that from 60 to 70 per cent of deaf-mutes have adenoids.

As time goes on, there are repeated attacks of the acute or a persistence of the chronic inflammation, and the child is said to take cold easily. His sleep is broken by abortive attempts to breathe through the nose, and the smothering sensation occasioned thereby furnishes the basis for hideous dreams and the child screams aloud and awakes in a high

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, May 1, 1924.

state of excitement; or he may only groan and mumble in his sleep and, if old enough, complain of having nightmares. These frightful dreams may produce a pronounced impression on his memory and haunt the child during waking hours, rendering him nervous and cowardly. It will often be found that the dream fright produces enuresis in the same manner that fright causes incontinence of urine in the waking hours of the normal individual. As the child grows older these night terrors may pass into somnambulism.

The position in bed is characteristic. The child will at first lie with the knees drawn up, or upon his chest and stomach with the head turned to one side, breathing through the mouth. The latter position will always be with the head thrown back and the mouth open, and the breathing will be accompanied by a snoring sound. During the frequent attacks of cold, the child is unable to draw the nasal secretions back into the throat or blow the nose, on account of the naso-pharyngeal obstruction, and the thick, viscid mucus will trickle down the labial fold, or if old enough, he will wipe it off on his sleeve, and is known as a "snotty-nosed kid."

Meanwhile, subtile facial changes are taking place. The lips become thicker and protrude; the nostrils become narrow and contracted, and are markedly depressed at the naso-labial junction, and the naso-labial fold becomes indistinct. The teeth are protruding or overcrowded and displaced. The child has a listless, stupid expression, and reacts slowly to mental stimuli. The chest flattens, the sternum protrudes and the legs become bowed. General anemia and undernutrition is in every way manifest. The lips are held slightly apart during waking hours, and the mouth is wide open when asleep. The child shows a very variable temper, and his attention cannot be concentrated on one thing for any length of time, and if old enough to be in school, he will fall behind in his work. The voice loses its resonance and sounds muffled and nasal. Some of the consonants will not be pronounced with distinctness, especially "m" and "n," which will be pronounced as "eb" and "ed." He now has a cold most of the winter months, and is troubled with a hacking cough, sometimes with stammering and chorea, and his mental efficiency diminishes.

The retrogressive changes going on behind the facial exterior of the adenoid child, are profound. The turbinal bodies, a very important part of the respiratory tract, are not developing, because the air that should be carried through the nostrils is now passing through the mouth, and the necessary stimulus to the development and function of these organs is lacking. The growth of the maxillary sinuses is held in abeyance, and the beauty and symmetry of the face is being destroyed. The ethmoidal cells and sphenoidal sinus, for lack of the normal stimulus, *i. e.*, inspired air, remain infantile or fail to fully develop, and the expansion of the base of the brain and growth of the cerebrum are retarded. The sounding box for the child's voice is ruined by the narrowing and obstruction of the nasopharyngeal space and nasal chambers.

Should the child recover from the adenoids, as best he may, he will always be a mouth-breather, for he may breathe through the nose while in the upright position, but when recumbent, asleep or awake, he will breathe through his mouth, for the nasopharyngeal space is too small and poorly developed to admit of breathing through, on account of the greater amount of blood that flows to these parts on lying down. He is troubled with a hacking cough during the winter months, on account of the drying influence of the inspired air on the pharynx and larynx, especially during sleep, and the tone of the voice is forever ruined. He remains through life, mentally and physically below par. If a girl, she is robbed of beauty of face and form, her greatest natural heritage.

The logical treatment for hypertrophy of Luscha's tonsil, is radical operative removal, which should be done as early as the third month, when indications arise. As the operation is fraught with so little danger and carries such lasting benefit, it should be done at the earliest indication. It should not be put off until profound and lasting changes, as above described, have taken place. The physician who fails to recognize the presence of adenoids in their early stage, or fails to insist on their immediate removal when discovered, has been derelict in his duty.

The physician who discovered the pathologic role of the adenoids, rendered humanity as great a service as the discoverer of vaccination, or antitoxin. As the future welfare of the rising generation is in the hands of the physician, he can give no greater service to mankind than by impressing on parents and teachers the importance of the discovery of adenoids, and their early removal, as it seems almost a sacrilege to permit a child, in an age when the struggle for existence is so strong, to be robbed for all time of physical health and mental strength, by a condition so tangible and so easily removed.

ABSTRACT OF DISCUSSION.

Dr. W. D. Jones, Dallas: I would like to speak of adenoids as a focus of infection. If you will raise the soft palate with a palate retractor and squeeze down, you will frequently get pus or cheesy material from the adenoid crypts, just as you would get it from the tonsil. I have heard physicians say they never fool with adenoids. Adenoids will retain infected material just the same as the tonsils will. I have demonstrated that by using a Lothrop palate retractor.

Dr. D. T. Atkinson, San Antonio: I think that this paper of Dr. Wright's is one that would fit well into any program. While it is true that we are all familiar with the manifestations of adenoids, it is well to be reminded occasionally that complications that may be a constant menace to the health and welfare of the child are often associated with this condition. The most noticeable of these are the facial malformations and their associated deflected septi and sinus involvements. Angle, of St. Louis, believes that these malformations are almost always due to adenoids.

The first step in the process of producing these changes may be found in the undeveloped alveolar processes. This results directly from mouth breathing, because, with the mouth open the tongue relieves the growing jaw of its normal support from within. Naturally, then, as the superior maxillary is narrowed, the palate elevates and the septum becomes deflected to one side or the other. Nasal polypi, according to Pinchon, may also be due to any malformation sufficiently marked to create a semivacuum, posteriorly. The engorged mucous membrane, drawn downward by a rarification of the air in the postnasal space, aided possibly by the to and fro movement produced by breathing, may end in the production of a polypus.

The largest percentage of the nose and ear work which finds its way into our offices may be traced to the existence of adenoids and diseased tonsils; and yet we are confronted many times daily, on the streets and elsewhere, by children who bear the unmistakable evidence of being chronic mouth breathers. Any one of these cases is evidence that some physician is neglecting his duty to a child, and that the subject of this paper is a very important one.

Dr. Wright (closing): I have been very highly gratified by the liberal discussion of the paper, and wish to add, as an after-thought, that I have seen several cases of "thumb sucking" relieved by removal of adenoids. I believe that the desire to suck the thumb arises from a sense of discomfort and irritation in the nasopharyngeal space, and that the negative pressure induced by sucking the thumb gives temporary relief. I wish to venture the suggestion that the reflex effect of adenoid irritation on the secondary sexual centers situated in the mouth and nose, may cause them to become primary erotic centers, and may lead to a very repulsive form of sexual perversion.

MISCELLANEOUS

FORMER ILLINOIS DOCTORS, ATTENTION!

The Illinois State Medical Society is sponsoring the preparation of "A History of Medical Practice in the State of Illinois." In order that this volume may be accurate and complete, assistance is asked from every source in securing personal data and experiences, photographs and documentary mementoes of pioneer Illinois doctors, as well as the achievements of Illinois doctors in fields other than those of medical science. Doctors who were former residents of Illinois or descendants of pioneer physicians of the "Illinois Country," are requested to communicate at once with the Committee on Medical History, Illinois State Medical Society, 6244 North Campbell Avenue, Chicago, Ill.

Prompt return, in good condition, of any material loaned the committee, is promised. The scope of the volume will range from the discovery of Illinois to modern times. Through the kindness of the editors of the various medical journals it is hoped to be able to reach those who will loan valuable material to the compilers of this publication. Some of the subjects touched upon in this history will be: "Physicians accompanying early explorers; government surgeons and physicians at the forts; early medicine in Illinois; primitive surgery and herb doctors; the saddle-bag doctors, their burdens, triumphs and perils, and Illinois medical men in fields other than medicine."

AN INTERESTING SPECIMEN OF SIAMESE TWINS.

Dr. W. C. Taylor of Calvert, submits the accompanying photograph of an interesting specimen of Siamese twins that he delivered recently. The twins

SIAMESE TWINS.

are both girls and their chests and abdominal walls are firmly united. No dissection has been done and no röentgenogram made, so it is not known whether internal structures are united or whether there is any osseous union of the twins. Fortunately, the monsters were stillborn.

IDLENESS LEADS TO OLD AGE.

Idleness, more often than work, leads to early old age and death, says Dr. W. L. Ranson, Canadian physician, in the July *Hygeia*, popular health journal. It is disuse that ages and decays a man's mind and body, he believes.

In India, the lifetime of the slowgoing, peaceful native averages from 19 to 21 years; in China from 22 to 25 years. In the more wideawake Occident, the average length of life is from 36 to 56 years.

A century ago in New York and Chicago, the average length of life was from 30 to 50 years. Today with the "killing speed' we hear so much about, the mortality has been reduced by 12 per cent.

"Octogenarians," advises the doctor, "should guard against solitude; they should mingle with youth in employments, amusements and travel. Properly understood, youth is but another name for vital force, a quality much needed by aging folk.

"Youth is a spiritual energy and, properly speaking, they is no old age but rather spiritual decay. Decadence, disillusion and weariness are the things we mean when we speak of growing old."

ONE ON US.

In the July number of the JOURNAL, in the news item from the Harris County Medical Society covering meeting of May 10, an error occurred in the abstract of Dr. Lumis' paper. The report in the JOURNAL reads, "The patient began to menstruate soon after the second dose of dextrose and iletin." The original item had it, "15 minutes after flow started." The abstract submitted was a carbon copy, and the comma in the line preceding the passage quoted, looked like a period. It seems that the flow referred to was that of the dextrose solution and not the catamenia.

Moral: Do not send the editor carbon copies if you do not want vicarious reports.

CAN ANY TEXAS DOCTOR BEAT THIS RECORD?

Dr. and Mrs. J. M. Boyd of Palacios, are here shown surrounded by their eight children (count 'em). Dr. Boyd writes us that several years ago he observed in our pages the photograph of a doctor and his seven

DR. J. M. BOYD AND FAMILY.

children, and that he wishes this latter father to know that he is no daddy at all!

Although certain that these splendid children of Dr. Boyd's inherit their good looks from their mother; nevertheless, a *doctor* who can feed, clothe and educate such a large and healthy family is due both our admiration and hearty congratulations.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Neutral Acriflavine-Abbott, 0.1 Gm. Ampules.—Each ample contains 0.1 Gm. neutral acriflavine-Abbott (see New and Nonofficial Remedies, 1924, p. 24). The Abbott Laboratories, Chicago.

Insulin-Stearns.—A brand of insulin. For a discussion of the actions, uses and dosage, see New and Nonofficial Remedies, 1924, p. 149. Insulin-Stearns is marketed: insulin-Stearns, single strength (5 Cc. vials containing 10 units in each Cc.) and insulin-Stearns, double strength (5 Cc. vials containing 20 units in each Cc.). Frederick Stearns and Co., Detroit.

Petrolagar.—A mixture composed of liquid petrolatum 65 Cc., agar 10 Gm., sugar and flavoring 2 Gm., sodium benzoate 0.1 Gm. water to make 100 Cc. Petrolagar has the actions of liquid petrolatum. It is claimed that the emulsification of the liquid petrolatum increases its efficiency, and that the agar adds soft bulk and tends to increase peristalsis. The average dose of petrolagar is 15 Cc. morning and night. Petrolagar is also marketed in the form of petrolagar (unsweetened), containing no sugar, petrolagar (with phenolphthalein), containing 0.33 Gm. phenolphthalein per 100 Cc., petrolagar (alkaline), containing milk of magnesia 25 Cc. per 100 Cc. The Deshell Laboratories, Ind., Los Angeles.—*Jour. A. M. A.*, June 28, 1924.

PROPAGANDA FOR REFORM.

Gly-So-Iodonate.—A few months ago the Council on Pharmacy and Chemistry published a report on an alleged bactericide, "Gly-So-Iodonate." The product is put on the market by a company whose name is much more imposing than its importance warrants—"The National Medical Research Laboratories" of Milwaukee, earlier known as the "Wisconsin Medical Laboratories." Charles E. Hutchings, who claims to be a "medical man," seems to have been the prime mover in putting "Gly-So-Iodonate" on the market. Hutchings, in letters, has stated that he is a "graduate of Kings College of London" and has claimed that he is a "member of Marquette Medical College." However, an inquiry directed to Kings College of London brought the reply that they had no record of a man of this name on the medical register. The Marquette University School of Medicine seems to be equally ignorant of Hutchings' connection with that institution. After the Council's report had been published, the National Medical Research Laboratories sent broadcast a six-page circular, three pages of which were devoted to what purported to be a "Partial List of Representative Industries Protecting Their Many Thousands of Employees from Infection With G-S-I." As it seemed reasonable to suppose that a concern which published a misleading formula for its product would be quite as likely to publish misleading references for the value of its product, some of the "representative industries" listed by the exploiters of "G-S-I" were written to. From the replies which were received, it seems evident that the basis for at least some of the references published by the exploiters of Gly-So-Iodonate rests on as flimsy a foundation as the alleged formula of the stuff and the educational claims of Charles E. Hutchings.—*Jour. A. M. A.*, June 7, 1924.

Vehicles for Prescriptions.—The following is a list of vehicles that can be used to prepare pleasant tasting mixtures: Aqueous elixir of glycyrrhiza N. F., compound elixir of cardamon N. F., compound elixir of almond N. F., compound elixir of vanillin

N. F., glycerinated elixir of gentian N. F., elixir of anise N. F., red aromatic elixir N. F., and compound syrup of asarum N. F. The formulas of these preparations may be found in the epitome of the U. S. Pharmacopeia and National Formulary, published by the American Medical Association.—*Jour. A. M. A.*, June 28, 1924.

NEWS

A Complete File of the "Texas Medical Journal" was presented the Medical Branch of the University of Texas, by Miss Fannie Daniel of Austin, in memory of her father, the late Dr. F. E. Daniel, founder and editor of the Journal. Appropriate resolutions were adopted by the faculty of the Medical College in appreciation of this generous gift.

Radium Lost.—Ten thousand dollars worth of radium was lost down a drain-pipe at St. Paul's Sanitarium, Dallas, recently. Plumbers have removed the sewer pipe in the search for this valuable tube of radium, as much to protect the possible finders of the substance against radium burns as to recover the property. The radium was insured.

Death From Snake Bite.—Bitten twice by a rattlesnake, Wayne Collins, 11-year-old son of John Collins, died July 10, at Benarnold, Milam County. The lad was at work in the field, gathering fodder and as he removed a shock the snake bit him. He thrust his foot at the snake and the reptile bit him a second time. The lad started across the field, dropping in a faint before he reached his home. He was dead within six hours after he had been bitten.—*Dallas News.*

A Forty Thousand Dollar Hospital is to be erected at Graham, Texas, in the near future. The architect's plans have been drawn and contract for the erection of the hospital awarded by the Graham Hospital Board. This hospital will be modern in every detail, and adequate for the town and surrounding country. Mr. M. K. Graham donated one-half of the cost of the hospital, and the other half is being donated by other public spirited citizens of Graham and its trade territory.

Free Clinic Opened July 2, at Provident Sanitarium, Waco. This clinic will be open from 1:00 to 3:00 p. m. every day except Sunday, in the main building of the sanitarium. It will provide treatment for all poor people unable to pay for medical services. These patients are assured the very best of care by the organized staff of thirty-five leading physicians co-operating with the sisters and nurses in the various departments of the clinic. Special attention will be paid to the prevention of disease, through the Social Service Department working in the homes of the patients. It is hoped in this way to raise the public health standards of the city.

The Cline Pharmacy Memorial.—Texas druggists are being asked to support the campaign to raise a $500,000 fund for the erection of a new building for the University of Texas, College of Pharmacy, at Galveston. Dallas architects are working on proposed plans for the structure, which would be known as the Cline Pharmacy Memorial, honoring the late Dr. R. R. D. Cline, pioneer teacher of pharmacy at the college.

A special committee of the State Druggists' Association met in Dallas July 11, in the office of Secretary Walter H. Cousins, to consider ways and means of raising the fund which the board of regents would be asked to augment for equipment and furnishings. —*Dallas News.*

Interstate Postgraduate Assembly, directed by the Tristate District Medical Society, extends a hearty invitation to the physicians of America who are in good standing in their state or provincial societies, to attend the annual assembly at Milwaukee, Wisconsin, October 27-31, inclusive, five full days of postgraduate work. Among the eminent members of the profession and physicians of international reputation who have accepted places on the program are, Dr. Nicholas Murray Butler, Sir Arthur Wm. Currie, Merritte W. Ireland, Monsieur J. Jusserand, French Ambassador; Edward E. Stitt and Professor Theodore Tuffier, Professor of Surgery, Faculty of Medicine, Paris, France. Space will not permit mention of the many other physicians of international reputation who will take part in the program. We are pleased to note in this distinguished list of names, that of our own Dr. Marvin L. Graves, Professor of Medicine, University of Texas.

The Tristate District Medical Association also announces an interstate postgraduate clinic tour to Canada, British Isles and France, to start May 18, 1925. Clinics and demonstrations will be conducted in the following cities: Toronto, Montreal, London, Liverpool, Leeds, Manchester, Newcastle, Edinburgh, Glasgow, Dublin, Belfast, Paris, Lyons and Strasburg. Sightseeing trips to all places of interest will be included in the regular tour. The cost of the tour, including first class hotels, board, steamship fare, clinic arrangements and all ordinary traveling expenses, will be under $1,000. The tour is open to all physicians in good standing in their state societies, and their families and friends. For further information, write the Managing Director, Dr. Wm. B. Peck, Freeport, Illinois.

SOCIETY NEWS

Cameron County Medical Society met at San Benito, June 27, with the following members present: Drs. Brown, Cash, Hunter, Lawrence, Loew, Morris, McBride, Sizer, Tribble, Vinsant, B. O. and B. M. Works and Yantis. The following visitors were also present: Drs. McCann of Raymondville, Edgerton and Edgerton of Rio Grande, Buck of Mercedes, Harrison of McAllen, J. W. Nixon, Sr., of Gonzales, J. W. Nixon, Jr., Cunningham and DePew, of San Antonio, and Watkins and Cruz of Harlingen.

Dr. Watkins presented the case of a three-year-old girl who had been kicked in the head by a horse. Numerous sequestra had been removed, and brain substance had exuded from the wound. She remained free from fever or any other untoward symptoms except a brief hemiplegia, which promptly disappeared following a flow of spinal fluid from the wound. This fluid continues to flow freely, and there is a fleshy mass almost covering the opening through the skull, which has not yet been closed. The case was discussed by Drs. B. O. Works, Loew, Nixon, Cunningham, Edgerton and McCann.

Dr. Cunningham presented a paper on "Fibroid Uterus," which was discussed by Drs. Edgerton, Nixon, McCann and B. M. Works.

Dr. DePew presented a paper on "Gall-Bladder Drainage," and Dr. Nixon read a paper on "Surgery of the Gall-Bladder," which papers were discussed jointly by Drs. B. M. and B. O. Works, Brown, Morris, McCann, Vinsant, Edgerton, Buck, Yantis and Hunter.

Resolutions praising the Medical Practice Act and recommending its enforcement, and also recommending better care of our insane, and calling upon candidates for Representative and Senator from the local county and district to express their attitude concerning these questions, were adopted by the society.

Drs. John C. Watkins of Harlingen and John M. Johnson of Rio Grande, were elected to membership in the society.

An invitation was extended to the Southwest District Medical Society to hold its next meeting in the Valley.

The next meeting of the society will be held at Harlingen, July 24.

Dallas County Medical Society met June 12, with 12 members present, at which time the following papers were read and discussed: "Cause of Conduct-Disorders and the Mental Hygiene Program," Dr. H. I. Gosline—discussed by Dr. John S. Turner; "Hypertension," Dr. John S. Turner; "Congenital Dislocation of the Hip," Dr. J. H. McGuire.

The applications for membership of Drs. J. T. Montgomery, C. L. Spencer and W. D. Evans, were referred to the board of censors.

Upon motion, it was decided to dispense with the summer meetings of the society, and to begin again with the September meeting.

DeWitt County Medical Society met at Yorktown, June 25, with the following members present: Drs. L. W. Nowierski, H. C. Eckhardt, G. T. Reuss, J. C. Dobbs, J. H. Pridgen, J. R. Frobese, G. W. Cross and B. J. Nowierski. The visitors present were: Drs. Dudley Jackson, I. L. McGlasson, C. C. Cade and J. Manning Venable, all of San Antonio.

A Mexican lunch was served at 6:00 p. m., at the home of Dr. B. J. Nowierski, after which the following scientific program was rendered: "Combined Methods of Treatment of Malignancies," Dr. Dudley Jackson, San Antonio; "Interesting Skin Diseases" (lantern slides), Dr. I. L. McGlasson, San Antonio; "Urological Diagnosis" (lantern slides), Dr. J. Manning Venable, San Antonio; "Carcinoma of the Cervix," Dr. C. C. Cade, San Antonio.

Eastland County Medical Society met June 10, at Eastland, and the Ladies' Auxiliary met with the society in the opening exercises, held at the City Hall. An address of welcome was given by Judge W. H. Sewell, which was responded to by Dr. W. C. Palmer of Ranger. The following scientific program was then rendered: "Nephritis in Children," Dr. C. O. Terrell, Ranger—discussed by Dr. L. C. McAdon of Ranger; "The Early Diagnosis and Treatment of Cancer of the Cervix," Dr. S. C. Richardson, Eastland—discussed by Dr. E. L. Graham of Cisco; "The Common Diseases of the Skin in Children," Dr. M. L. Stubblefield, Gorman—discussed by Dr. S. C. Ferguson of Eastland; "Changes that Occur in the Oral and Nasal Cavity as Result of Orthodontic Treatment," Dr. G. M. Gillespie, Abilene—discussed by Dr. W. E. Chaney of Eastland; "The Significance of Chronic Right-Sided Pain and Indigestion from a Radiological Standpoint," Dr. I. Warner Jenkins, Waco—discussed by Dr. J. H. Caton of Eastland; "Some Reasons Why the Doctor Will Be in Politics in 1924 Elections," Dr. Joseph Gregory, Cisco.

Dr. J. H. Caton of Eastland, gave his delegate's report of the Annual Session of the State Association at San Antonio.

Tarrant County Medical Society met June 17 with 12 members present.

The transfer of Dr. W. H. Rogers from Carter County Medical Society of Oklahoma, was accepted by the society.

Due to the small number of members present, the scientific program was dispensed with. Drs. I. C. Chase and Holman Taylor, gave interesting accounts of the Chicago meeting of the American Medical Association.

Dr. H. L. Warwick reported his recent visit to the medical college at Monterey, Mexico, at which place he read a scientific paper and conducted clinics.

Dr. R. W. Thompson gave an oral report of the activities of the Charter Commission of the City of Fort Worth, and Dr. Gilmore, chairman of the Charter Committee of the Society, presented resolutions covering the following points: (1) the city manager plan of government endorsed; (2) special tax levy for each department not favored, but if such a levy decided upon, the Health Department should be given sufficient funds to function in a scientific and thorough manner; (3) recommendation that the Health Department be given specific power to enforce all health laws, and (4) the Health Officer to be in whole-time service, specially trained and qualified. The resolutions were unanimously adopted, and will be referred to the City Charter Commission.

Dr. Wilmer Allison presented resolutions condemning quack dental advertising, and presented Dr. Woolwine, a member of the local dental society, who spoke on the subject. By vote of the society, the resolution was referred to the board of directors, with power to act.

Dr. Holman Taylor then made a brief address upon the educational campaign being conducted by the State Medical Association.

Seventh District Medical Society met in the Stephen F. Austin Hotel, Austin, July 3, with a good attendance.

On invitation, Dr. T. J. Bennett of Austin, a Past President of the State Medical Association, gave a brief history of the district medical society. A letter from Dr. R. L. Talley of Temple, secretary of the Twelfth District Medical Society, inviting the members of the Seventh District Medical Society to attend their meeting, to be held at Marlin, July 8, was read, after which the following scientific program was rendered: "An Outline of the Indications for Caesarian Section and of Some of the Factors Bearing Upon This Procedure," Dr. Willard R. Cooke, Galveston—discussed by Drs. R. W. Shipp and Joe Gilbert of Austin; "Cholecystectomy: The End Results in 100 Cases," Dr. L. W. Pollock, Temple—discussed by Drs. Joe Gilbert and F. C. Gregg of Austin; "The Value of Routine Prostatic Examination," Dr. B. Weems Turner, Houston—discussed by Dr. Zeno T. Martin, Austin; "Some Aspects of Hay Fever," Dr. I. S. Kahn, San Antonio—discussed by Dr. A. F. Beverly, Austin; "Uterine Malignancies Treated by Cautery, Radium and *X*-rays," Dr. M. W. Sherwood, Temple—discussed by Drs. I. L. McGlasson of San Antonio and W. R. Cooke of Galveston; "Diagnosis and Surgical Treatment of Goiter," Dr. E. O. Rushing, Dallas—discussed by Drs. A. C. Scott, Jr. of Temple and Joe Gilbert of Austin; "Acute Otitis Media in Infants and Children," Dr. Edwin M. Sykes, San Antonio—discussed by Dr. S. J. Clark, Austin.

At the conclusion of the day's program a swimming party and chicken dinner at Barton Springs were enjoyed by members and their guests.

The next meeting will be held in February, at Austin.

The Twelfth District Medical Society met at Marlin, July 8, with more than 100 doctors and their wives in attendance. The session was called to order by President Dr. Geo. S. McReynolds, of Temple, at 9:00 a. m.

The following doctors took part in the scientific program: Drs. R. J. Alexander, H. F. Connally and W. L. Crosthwait of Waco; I. S. Kahn and W. C. Farmer of San Antonio; Howard Smith and A. J. Streit of Marlin; F. H. Newton and I. N. Suttle of Corsicana; W. M. Gambrell of Belton; L. W. Pollok, R. W. Noble, G. V. Brindley and J. M. Murphy, of Temple; Sidney Israel of Houston and Ben L. Schoolfield of Dallas.

Members of the Ladies' Auxiliary attended the morning session of the society but held a program of their own in the afternoon, at the home of Mrs. J. W. Torbett, where a plate luncheon was served the doctors and their wives. A six-o'clock dinner was served at the home of Mrs. W. H. Allen, which was

followed by a musical program, under the auspices of Mesdames F. M. Sewall, Frank Shaw and Oscar Torbett, of the Ladies' Entertainment Committee.

The Twelfth District Medical Society has heretofore convened for two days. This is the first one-day meeting that has been held. It was declared to be a complete success.

The North Texas Medical Association met at Decatur, June 24-25. Invocation was delivered by the Reverend Ward, President of the Decatur Baptist College, after which a musical program was given.

Dr. P. J. Fullingim, President of the Wise County Medical Society, welcomed the doctors and their wives, and Mayor T. J. McMurray delivered the welcome address on behalf of the citizens of Decatur.

The following papers were read and discussed: "The Increasing Responsibility of the Obstetrician," Dr. Edwin Davis, Fort Worth; "Episiotomy, Its Indications and Surgical Technique," Dr. I. A. Estes, Dallas—discussed by Drs. C. R. Hannah and L. Mackechney; "Pyelitis in Pregnancy," Dr. E. H. Bursey, Fort Worth—discussed by Drs. Chas. H. McCollum, C. R. Hanna and Elbert Dunlap; "Relaxation of the Pelvic Floor," Dr. J. T. Lawson, Bowie—discussed by Drs. D. M. Higgins, Elbert Dunlap and C. R. Hanna; "Report of Clinical Cases," (obstetrical), Dr. Elbert Dunlap, Dallas—discussed by Dr. D. M. Higgins; "After Care of the Mother," Dr. L. Mackechney, Wichita Falls—discussed by Drs. J. T. Lawson, Edwin Davis, H. L. Moore, C. R. Hannah and P. C. Funk; "Blood Transfusion with Preference for the Direct Method," Dr. L. S. Thompson, Dallas—discussed by Drs. T. C. Terrell, H. L. Moore and F. S. Schoonover; "Some Needed Health Legislations," Dr. W. E. Redford, Boyd—discussed by Drs. B. H. Griffin, C. H. Harris, Geo. D. Lain, J. J. Ingram, D. M. Higgins and J. M. Inge; "Modern Problems of Preventive Medicine," Dr. L. H. Reaves, Fort Worth—discussed by Drs. Edwin Davis, P. C. Funk and R. H. Needham; "Use of Acidified Fresh Milk in Treating Undernourished Infants," Dr. H. L. Moore, Dallas—discussed by Drs. Johnson, Edwin Davis and Arthur Gleckley; "Hyperesthetic Rhinitis and Its Treatment with Calcium Lactate and Thyroid," Dr. K. H. Beall, Fort Worth; "Tremors," Dr. Jno. S. Turner, Dallas—discussed by Dr. E. R. Carpenter; "Responsibilities and Results in Tuberculosis Work," Dr. John Potts, Fort Worth—discussed by Drs. P. C. Funk, E. R. Carpenter, M. A. Griffith, L. H. Reeves and D. Y. Stem; "The Acute Nephropathies," Dr. Will S. Horn, Fort Worth—discussed by Dr. L. H. Reeves; "Foot Stabilization in Infantile Paralysis," (illustrated), Dr. W. B. Carroll, Dallas—discussed by Drs. B. L. Schoolfield, C. F. Clayton and W. B. Carroll; "Some Factors in Surgical Treatment of Goitre," Dr. E. O. Rushing, Dallas—discussed by Drs. J. S. Turner, Arthur Gleckler, H. L. Warwick, M. E. Gilmore and E. O. Rushing; "*X*-Ray Treatment of Impaired Hearing," (illustrated), Dr. H. L. Warwick, Fort Worth—discussed by Drs. M. E. Gilmore, W. W. Fowler and L. H. Reeves; "Preparatory and After Treatment of Surgical Cases," Dr. E. W. Wright, Bowie; "Postoperative Care and Treatment," Dr. E. P. Hall, Fort Worth—discussion of Drs. Wright's and Hall's papers jointly by Drs. Wm. Ott, F. S. Schoonover, C. F. Clayton, Wright and Hall; "Nasal Obstructions, Importance of Correct Diagnosis and Treatment," Dr. W. W. Fowler, Dallas—discussed by Drs. Jno. Potts, H. L. Warwick and W. W. Fowler; "Surgical Treatment of Trifacial Neuralgia," Dr. W. O. Ott, Fort Worth.

The meeting of the Ladies' Auxiliary, in the afternoon, was presided over by Mrs. H. Leslie Moore, President, and was greatly enjoyed by all visiting ladies.

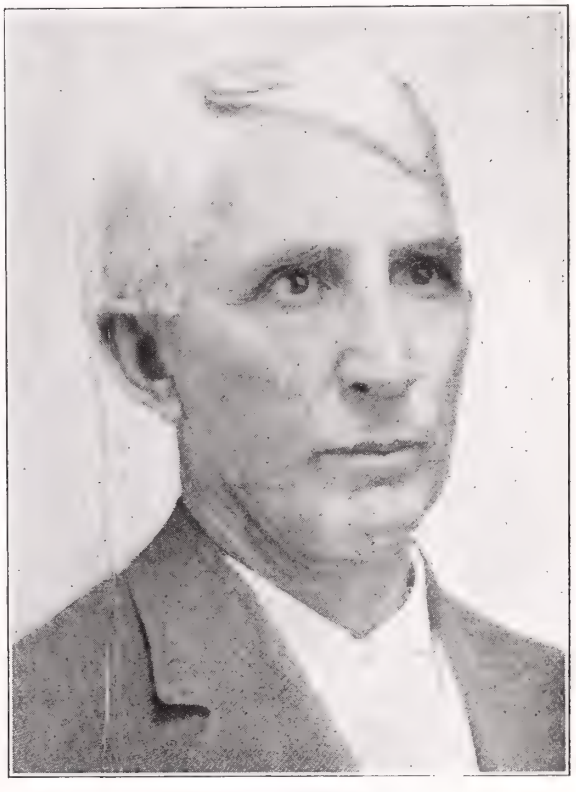
An old-fashioned barbecue at Decatur Lake was enjoyed by the attending doctors and their wives, Tuesday evening.

President G. D. Lain stated that this was the first time in the history of the organization that the North Texas Medical Association had met in the western end of the district. The two days' session was well attended, and the members returned to their homes more enthusiastic than ever for the Association.

DEATHS

Dr. Chas. Franklin Wilson of Memphis, Texas, died at his home June 11, 1924.

Dr. Wilson was born at Everton, Missouri, March 16, 1857, and received his preliminary education at Marshville, Missouri, later studying medicine at Louisville, Kentucky, and Kansas City, Missouri. He was married to Miss Mary E. Rector of Everton, July



DR. C. F. WILSON.

15, 1877, and to this union were born seven children, five of whom are living.

Dr. Wilson practiced for several years at Boonsville, Texas, after which he moved to Memphis, where he had been in active practice for more than twenty years. It is said by those who knew him best, that he never refused to make a call if the summons came from the poor of his city or county, and that his great delight was in practicing for those who could not pay for his services.

Dr. Wilson was a faithful member of the Methodist Church, a Mason, and an active and honored citizen. For eighteen years he had been a member of the Panhandle District Medical Society, and was its president at the time of his death.

Dr. Wilson is survived by his widow and five children, Dr. W. Wilson and Gordon Wilson of Mem-

phis, Mrs. Viola Wimberly of Amarillo, Mrs. Wm. Ragsdale of Anaheim, California, and Mrs. Chas. Williams of Newlin, Texas.

One of Dr. Wilson's brother practitioners has said of him, "Dr. Wilson was looked upon, by those who knew him best, as being an authority in medicine, and both the medical profession and the laymen join in saying, 'Truly, a prince has fallen.'"

BOOK NOTES

Clinical Tuberculosis. By Francis Marion Pottenger, A. M., M. D., LL. D., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. With a chapter on Laboratory Methods by Joseph E. Pottenger, A. B., M. D., Assistant Medical Director and Director of the Laboratory, Pottenger Sanatorium. Second Edition. Two volumes. Octavo. Cloth. Volume I contains 22 chapters, 608 pages and 105 illustrations and charts, with 6 plates in colors. Volume II contains 51 chapter, 726 pages and 65 illustrations and charts, with 4 plates in colors. Publishers, C. V. Mosby Company, St. Louis, 1922.

This exhaustive work on tuberculosis is well known to those who are doing special work in this field. Its scope is well described by the author as "encyclopedic." This second edition has been thoroughly revised and brought abreast of the present advancement in the study and treatment of tuberculosis. The most modern diagnostic and laboratory methods are described in detail, and especially valuable are those chapters dealing with the recognition of early tuberculosis. It is so often a lamentable fact that the diagnosis of tuberculosis is not made until the disease has become so far advanced that the patient can make his own diagnosis. So much depends upon early recognition and prompt treatment, that more and more attention is being paid to early diagnosis. It is well pointed out by Dr. Pottenger, that in using the expression "early diagnosis," one is speaking in relative terms only, as the tubercle exists months, and even years, oftentimes, before its presence is made manifest through signs and symptoms.

The nervous phenomena which often accompany pulmonary tuberculosis, are very interestingly discussed by the author. There have been many conflicting opinions in regard to whether there is such a thing in fact as a "tuberculous psychosis." The general practitioner, as well as the tuberculosis specialist, will find this work invaluable for study and reference.

Epidemiology and Public Health. A text and reference book for physicians, medical students and health workers, in three volumes. By Victor C. Vaughan, M. D., LL. D., Chairman of the Division of Medical Sciences of the National Research Council; Emeritus Professor of Hygiene in the University of Michigan; assisted by Henry F. Vaughan, M. S., Dr. Ph., Commissioner of Health of the City of Detroit, and Geo. T. Palmer, M. S., Dr. Ph., Epidemiologist, Department of Health, City of Detroit, Octavo, Cloth. Price $9.00 per volume. C. V. Mosby Company, St. Louis.

The two volumes of this work that we have received are indeed interesting reading. This is the most exhaustive and authoritative discussion of the subject of epidemiology and public health that we have seen. It is evident that no labor has been spared in compiling the history of the various epidemic diseases, and the most modern preventive methods against these scourges of humanity are detailed clearly and concisely. This work will be found by the physician, the health worker and the medical student, most valuable as a reference in its chosen field. Volume I contains 20 chapters, 700 pages and 83 illustrations. Volume II contains 41 chapters, 918 pages and 53 illustrations. Especially interesting are the chapters on typhoid fever, yellow fever and malaria, the great trio which rendered semitropical and tropical countries practically uninhabitable by white men, and which yearly took an appalling toll from the native populations. The wonderful account of how medical science, through its patient, laborious and heroic workers, overcame these dread diseases and made habitable the countries in which they were "endemic," is a tale which might well have been appropriated from "Arabian Nights." The name of Victor C. Vaughan will always be associated with this subject, by reason of his own long and distinguished service in this great field of medicine.

Differential Diagnosis, Vol. II, presented through an analysis of 317 cases. By Richard C. Cabot, M. D., Professor of Medicine and Social Ethics at Harvard University. Third edition, revised. Octavo, Cloth. Chapters 19, pages 709, illustrations 254. Price $9.00 net. W. B. Saunders Company, Philadelphia and London.

Dr. Cabot has this to say of the third edition of his book: "While the cases remain unchanged in this edition, the introductory discussions (especially those concerned with abdominal and other tumors) have been considerably modified and enlarged. There still remain words or phrases in the text of some of the cases which should be modified in order to bring the book completely up-to-date. But most, if not all, of these are concerned with unessential matters, and it has not seemed necessary, therefore, to make the changes in every case."

This work is so well known to the medical profession that it does not seem necessary to attempt any extensive review. Suffice it to say that, like Osler's Practice of Medicine, it ranks among the classics in its field.

A Treatise on Orthopedic Surgery. By Royal Whitman, M. D., M. R. C. S., F. A. C. S., Surgeon to the Hospital for Ruptured and Crippled; Consulting Orthopaedic Surgeon to the Hospital of St. John's Guild, to St. Agnes's Hospital for Crippled and Atypical Children, White Plains; to the New York Home for Destitute Crippled Children, to the Darrach Home for Crippled Children and to the New York State Board of Health; Member of the Committee of Medical Experts of the New York Department of Labor; Member of the American Orthopaedic Association; Corresponding Member of the British and French Orthopaedic Societies and of the New York Surgical Society, etc. Seventh Edition, thoroughly revised. 24 chapters, 994 pages. Illustrated with 877 engravings. Octavo, Cloth, $9.00. Lee & Febiger, Philadelphia and New York, 1922.

The fact that this splendid treatise on orthopaedic surgery has gone through seven editions bespeaks its popularity and its merit. The book is made especially valuable because of Dr. Whitman's extensive experience in this exacting field of surgery. The text is concise, yet clear and understandable, and is augmented by numerous fine engravings, which are of great assistance in visualizing the condition under discussion. This work is so well known that we do not consider it necessary to attempt any extended discussion of it in these columns.

Texas State Journal of Medicine

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Vol. XX **September 1924** **No. 5**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Congratulating Mrs. Ferguson.—We congratulate Mrs. Miriam A. Ferguson on her nomination by the Democratic party for the high office of Governor of the great State of Texas, and the splendid opportunity for service it offers, taking the nomination as equivalent to election. We offer to Mrs. Ferguson the assistance of the medical profession of the State in administering the health affairs of the State during her administration, in addition to our promise to observe otherwise all of the obligations of good citizenship. We are hopeful and confidently expect, that she will permit us to help, and that the first woman Governor of Texas, or any other State in the Union, will go down in history as prizing the health and lives of her people above all other considerations. In view of the work of education recently undertaken by the State Medical Association and its successful prosecution thus far, we feel that this would not be a difficult task. We call upon our members, regardless of their recent and perhaps contrary affiliations, to give the new administration every possible support, particularly along public health lines.

Publicity Campaign in Progress.—The main assault in the publicity campaign has been made and the first objective has been attained. There is desultory firing on the outskirts, but except for that, all is serene. What further advances will be made, and when, remains to be determined. It is left with each unit to clear its own sector and consolidate its position. Addresses have been made in 82 communities by 31 speakers—according to reports coming into the Central Office. Data is so incomplete as to the number of people addressed in each instance, that we will not discuss that phase of the situation at the present time. Suffice it to say that there is every evidence of widespread interest in the movement, not to say astonishment that the medical profession should have been so bold and assumed such leadership. We have been variously condemned and applauded. The christian scientists, chiropractors, et al., have broken into print with the usual charge that the "Medical Trust" is trying to corner the healing market. The christian scientists are specializing on the charge that the doctors are trying to scare the people into being sick. The press, except for that part of it which is wildly antagonistic to the medical profession, seems to be immensely pleased that we have apparently departed from medical ethics far enough to allow the purchase of advertising space in the lay press. Some of the papers are complimentary in regard to our self-sacrificing interest in the public welfare, also. We have a very interesting collection of clippings from the lay press, pro and con, bearing on the campaign, many of which will be eventually published. Space is not available for this purpose now.

We presume that practically all of our members have seen the advertising matter put out. This consisted of a half-page spread, with a simple, dignified but forceful statement of our purposes in the campaign, followed by a quarter-page catchy ad on some phase of the problem, appearing on successive

days and immediately preceding the lecture in each community where one was to be delivered. We will eventually publish these ads in reduced facsimile. We have heard of no criticism of their makeup, or the fact of their appearance in the lay press. The cost of the advertising campaign has been, to date, $6,044.25. That includes the insertion in 80 newspapers of the series of advertisements mentioned. It is believed that the advertising campaign has been as beneficial as the speaking campaign, although it will be conceded that neither would have been nearly so successful without the other. The total cost of the campaign, including overhead and enlargement of the Central Office force, from the beginning, has been over $12,000. Many of our speakers have not yet turned in their expense accounts, but the additional items will not be a great deal.

It will be understood that the speakers in all of the distinctive centers, in accordance with the advice of the councilors, arranged for the organization of the surrounding territory, with a view of placing speakers on each available platform therein, from local groups. It was impracticable to send speakers from the Central Office to all of these points. These speeches are presumably being made now, for which reason the data in that regard included in this discussion is probably far short of the mark. Undoubtedly many speakers have not reported all of their speaking dates. We probably will never have a complete list of the speeches made. In this connection, the State Secretary would be pleased to receive suggestions from members, covering any phase of the publicity campaign, and particularly making suggestions for its future conduct.

The Speakers' Bureau (undoubtedly incomplete) is at present as follows: Drs. E. H. Cary, S. E. Thompson, C. H. Harris, W. B. Thorning, C. A. Hays, I. C. Chase, J. J. Terrill, I. L. McGlasson, Thos. Dorbandt, O. H. Judkins, F. P. Miller, R. E. Bowen, A. I. Folsom, M. F. Bledsoe, W. D. Jones, C. M. Rosser, Will Cantrell, J. H. Burleson, M. L. Graves, W. H. Cade, A. C. Scott, H. R. Dudgeon, L. L. Lee, Holman Taylor, Joe Becton, Joe Gilbert, Preston Hunt, S. P. Cunningham, Dudley Jackson, C. W. Goddard and J. O. McReynolds.

The communities in which the speeches were delivered (probably incomplete) are as follows: Abilene, Amarillo, Arlington, Athens, Atlanta, Austin, Ballinger, Bastrop, Beaumont, Beeville, Big Spring, Boerne, Bonham, Brownsville, Brownwood, Canton, Childress, Cisco, Clarksville, Coleman, Colorado, Commerce, Corpus Christi, Corsicana, Cuero, Dallas, Del Rio, Denison, Denton, De Kalb, Eastland, El Paso, Fort Worth, Gainesville, Georgetown, Gonzales, Greenville, Jacksonville, Hallsville, Hillsboro, Kenedy, Kerrville, Kilgore, Kingsville, Llano, Lockhart, Longview, Lufkin, Marlin, Marshall, Memphis, Mt. Pleasant, Nacogdoches, Omaha, Orange, Palestine, Paris, Pearsall, Pecos, Port Arthur, Quanah, Ranger, Round Rock, Rusk, Sabinal, San Angelo, San Antonio, Santa Anna, Sherman, Sweetwater, San Marcos, Taylor, Temple, Texarkana, Tyler, Uvalde, Victoria, Waco, Waxahachie, Wichita Falls, Winters, Yoakum.

Section Officers and Committees.—President Dr. Bledsoe authorizes the publication of the following list of section officers and committees, for his administration:

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Section on Medicine and Diseases of Children.

Chairman, Dr. Chas. M. Hendricks, El Paso.
Secretary, Dr. C. W. Stephenson, Wichita Falls.

Section on Surgery.

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Section on State Medicine and Public Hygiene.

Chairman, Dr. A. H. Flickwir, Houston.
Secretary, Dr. W. S. Winter, Port Arthur.

Section on Gynecology and Obstetrics.

Chairman, Dr. J. W. Bourland, Dallas.
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Section on Ophthalmology, Otology, Rhinology and Laryngology.

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Secretary, Dr. O. H. Judkins, San Antonio.

Section on Radiology and Physiotherapy.

Chairman, Dr. R. T. Wilson, Temple.
Secretary, Dr. Robt. H. Milwee, Dallas.

COMMITTEES.

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Dr. Holman Taylor, Secretary (ex-officio), Fort Worth.
Dr. W. B. Thorning (ex-officio), Houston.
Dr. C. M. Rosser (three years), Dallas.
Dr. I. C. Chase (three years), Fort Worth.
Dr. H. W. Cummings (three years), Hearne.
Dr. A. A. Ross (two years), Lockhart.
Dr. A. C. Scott (two years), Temple.
Dr. W. B. Russ (two years), San Antonio.
Dr. Joe Becton (one year), Greenville.

Dr. S. E. Thompson (one year), Kerrville.
Dr. A. F. Beverly (one year), Austin.

Council on Medical Defense.

Dr. W. D. Jones, Chairman (two years), Dallas.
Dr. Holman Taylor, Secretary, (ex-officio), Fort Worth.
Dr. A. P. Miller (three years), Houston.
Dr. F. P. Miller (one year), El Paso.
Dr. W. A. King*, San Antonio.

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Dr. Holman Taylor (ex-officio), Fort Worth.
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Dr. Joe Becton, Greenville.
Dr. F. P. Miller, El Paso.
Dr. W. B. Russ, San Antonio.
Dr. Winfred Wilson, Memphis.

SPECIAL DELEGATES.

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Texas Representative National Council on Medical Education.

Dr. M. L. Graves, Galveston.

Texas Delegate to the Association of American Medical Colleges.

Dr. Wm. Keiller, Galveston.

To the Texas Dental Society.

Dr. R. S. Killough, Amarillo.

To the Texas Pharmaceutical Association.

Dr. W. B. Russ, San Antonio.

To the Arkansas Medical Society.

Dr. Joe Becton, Greenville.

To the Colorado State Medical Society.

Dr. W. D. Jones, Dallas.

To the Louisiana State Medical Society.

Dr. D. S. Wier, Beaumont.

To the New Mexico State Medical Association.

Dr. A. C. Scott, Sr., Temple.

To the Oklahoma State Medical Association.

Dr. J. H. Caton, Eastland.

To the Texas Association of Sanitarians.

Dr. N. D. Buie, Marlin.

*Unofficially appointed a member of the Council, anticipating the adoption of an amendment to the Constitution providing for an additional member.

The Importance of Scientific Sections can hardly be overestimated. It would seem that President Bledsoe has provided for this part of our scientific work most admirably, in his appointments. Section officers are, without exception, practical practitioners of medicine, in addition to which they are scientifically well qualified. The contributions for their respective Sections should be correspondingly

profitable and pleasing. The scientific status of our JOURNAL, which is the principal medium of distribution of the products of the Sections, will be very largely determined by the character of the contributions to the Scientific Sections, and the abiding advantage of the Annual Session to those who attend will come from the same source. In addition, the Scientific Section may coöperate to great advantage with the committees in charge of the several scientific subjects of special interest to the Association. For instance, if the Committee on Scientific Exhibits should arrange to cover certain subjects, there would seem no reason why the section officers could not arrange to have papers on the same subjects, and *vice versa*. Or, if the Committee on Scientific Work should choose to bring certain new problems to the direct attention of the medical profession of the State, section officers could easily secure papers on these subjects. No doubt there are other means of coöperation which will suggest themselves, and we are safe in predicting that section chairmen, and committee chairmen as well, will be pleased to hear from our members with suggestions in this regard.

It will be remembered that the Association has adopted a new and radical policy for the government of scientific sections. For one thing, the number of papers in each section has been limited, as follows: Section on Medicine and Diseases of Children, 25; Section on Surgery, 25; Section on Ophthalmology, Otology, Rhinology and Laryngology, 20; Section on State Medicine and Public Hygiene, 20; Section on Gynecology and Obstetrics, 18. Each section is expected to have a paper on Cancer, appropriate to the requirements of the section. Prospective contributors to the scientific program are required to submit their papers to section officers in advance of their acceptance, the by-laws requiring that the secretaries of county societies (or where county societies are not functioning, district societies) certify to section officers that papers on the scientific program have been read before their respective organization, in full. This must be enforced rigidly and without exception. These requirements were exacted by agreement between the Committee on Scientific Work and Section Officers, in the preparation and rendition of the scientific program for the last session. From a practical standpoint, some difficulty was experienced in inducing our members to ask for places on the program and justify their requests by the submission of suitable papers, even in the form of preliminary drafts, and there was necessarily some departure from this rule. Some of our better known authors feel that their reputation entitles them to invitation to contribute to scientific programs. No doubt others are unduly modest and hesitate to ask for preference. On the other hand, in at least one instance, more papers were offered than could be cared for, and some embarrassment resulted. However, most of the section officers last year gave it as their opinion that the new order of things was a distinct advantage and recommended its continuance, but doubt was expressed in some quarters as to whether in an organization the size and composition of ours, we could insist upon hard and fast rules of such character. We have an idea that there must be some give and take, and we assume that what must be will be. Ideally, a prospective author, no matter what his status in the scientific world, with anything in particular to give out, would not hesitate to offer, and the beginner in the field of scientific literature feeling that he might develop talent and that there are matters of interest he could profitably bring to the attention of the Association, would likewise offer; but practically, the experienced contributors, while always loaded, do not always have something new and startling to give out. They are cocked and primed and can be depended upon to produce something worth while, but the amount of new material available is really small, and the beginner finds himself wondering whether what he thinks is of interest is really so, and whether he should presume to offer his services. Of course, we exclude from this discussion those who offer to contribute simply as an advertising proposition. The idea is, as we say, to do the best we can in preparing our scientific programs, with some good and established plan to work to.

There was some complaint last year that authors who had promised that their papers would be read before county societies came to the meeting without the required certificates, and without the papers having been so read. The question then was, whether the sections should be denied the privilege of hearing the papers simply for the sake of applying the law. It is to be hoped that no such predicament will arise next year. This requirement is based upon practical, common sense principles, and should be observed. An author is entitled to the candid opinion of his fellows in his home society, and his home society is entitled to give its opinion before he goes forth as their representative, ex-officio, with a contribution to scientific literature. It is also to be hoped that those who propose to write papers for the scientific program will remember the difficulties inherent in lantern demonstrations, and refrain from

preparing anything of the sort except under conditions actually justifying it. We cannot reiterate too often, that our members do not care to be denied necessary ventilation to view a lot of stereoptican illustrations that do not illustrate, or that are but remotely connected with the paper being read. We are told that this has been done, and that unfavorable criticism has arisen as a result. While we are passing out words of caution thus far in advance, we might also advise against the cluttering up of papers with large numbers of case illustrations which do not serve any useful purpose, so far as the audience or the readers of the JOURNAL are concerned, or the spreading out of a paper so as to cover every related idea and concurrent thought. We do not advocate the preparation of a paper in the form of the multiplication tables, or an effort to compete with the shortest verse in the Bible. Brevity may be the soul of wit, and very much to be desired, but it is sometimes as bad as tautology, or long ideas long drawn out. There is a golden mean.

A new section—"Radiology and Physiotherapy," will be inaugurated this year. No limit has been set as to the number of papers allowed. We presume that matter will be attended to by the Committee on Scientific Work, in conference with the officers of the section. We hope this section will prove of value and that its program will be readily filled with the best that the profession of Texas can offer along the lines indicated.

An important matter in connection with our scientific programs must be reiterated. The by-laws provide for the invitation of noted physicians from without the State, to contribute to the program and attend the annual session as "guests." The authority to extend such invitations is vested in the President, alone. No one else, not even officers of sections, has authority to even tentatively invite a nonmember who is eligible to membership, to contribute to the scientific program, or attend the Association meeting as a guest. Customarily, the President invites all who are nominated for this honor by section chairmen. There have been exceptions to this rule, of course. For one thing, a section chairman in his zeal may overload his section with outside talent, or all of the sections may be so heavily endowed with contributions from abroad as to make it necessary to place a limit. These and other factors in this connection will be borne in mind by the President. Those who desire this honor extended to certain individuals, should make the request, preferably through section chairmen. Under no circumstances should members of the Association extend even tentative invitations direct.

We trust those who expect to contribute to the scientific program will not lose time in taking the matter up with the proper section chairman or secretary.

The Committee System of Administration has both advantages and disadvantages. Because of its cheapness it is essential in an organization such as ours. Manifestly, we could not afford to pay the salaries necessary to carry on the work of these several committes, and do it right. In addition to the element of economy, the advantage of bringing into the organization new blood, from time to time, is worth while. If it were purely a matter of administration, all that we would need would be an active board of directors and a few hired hands. That is not the case with us, combining as we do, business and pleasure, profit and public service, science and the ethics of a noble profession. The policies of all organizations are developed by small groups but they are based upon the concensus of opinion of the membership, if they are wisely formulated and of any considerable degree of permanence. The principal disadvantage in the system is that the committees often will not work; or if they do work, will do so perfunctorily. To the extent that this is true, the system will be a failure; conversely, to the extent that it is not true, the system will be successful. It is, then, largely a matter of wisdom in selecting personnel. President Dr. Bledsoe has had large experience and enjoys a wide acquaintance among our members. We believe he has selected his committees wisely, and that our committee reports next year will be helpful. We congratulate the gentlemen selected upon the opportunity thus given them for service, and beg the members of our Association to help them in their assigned tasks, particularly by way of suggesting things to be done and things not to be done.

Last year the committees on Scientific Work, Scientific Exhibits, Cancer, and the Section officers, coördinated their efforts quite successfully, the Committee on Scientific Work taking the lead, in view of the decision of the House of Delegates that this Committee should assume the status of a "Council," and direct all of the scientific work of the Association. It is anticipated that the same procedure will be followed this year, as President Dr. Bledsoe warmly approves of the idea, and we speak thus early for the cooperation of our members and in the matter of suggestions and the like.

One of the few successful efforts at assembling scientific exhibits that we have made,

was made last year. Many commendatory remarks were heard, both by our members and by laymen, concerning the exhibits, which were placed quite conspicuously in the lobby of the Gunter Hotel. It would be worth while, we are sure, if those of our members who know of any interesting pathological specimen, would notify the chairman of this committee. Perhaps the most serious drawback to the scientific exhibit project, is the cost of getting such an exhibit together and properly displaying it. We do not presume to pass judgment, but it occurs to us that medical colleges, hospitals and clinical groups, could well afford to defray the expenses of their respective contributions to such an exhibit, both because of the legitimate advertising and the proper pride which will come of the effort.

The Committee on Cancer last year recommended, and the recommendation was approved by the House of Delegates, that the Cancer campaign instead of being an affair of one or a few months, be a year-around proposition. Quite probably this committee will work to a large extent through the Council on Legislation and Public Instruction, carrying on the campaign of publicity and education for a time through this channel. It would seem that no other subject offers more by way of advertising than that of cancer, and surely the opportunity to inform the public of the necessity of requiring physicians to be well qualified is offered in a discussion of this sort. Our members can assist this committee by notifying the chairman of opportunities to address suitable audiences.

The Committee on Revision of the Constitution and By-Laws is the same as last year, with the addition of one member. The resolution originating the committee required that the President-Elect be a member, and the House of Delegates at San Antonio decided that the personnel of the committee should remain as it had been during the year. In view of the very important work to be carried on by this committee, the additional member would seem to be justified. Much study was given the subject by the committee last year, but because of the publicity and educational campaign imminent, no opportunity was offered to thresh out and coordinate the ideas of the several members of the committee. It is expected that this committee will conclude its endeavors this year, and present to the House of Delegates at Austin, a completely revised and, it is hoped, complete and competent set of laws for its government for some years to come. Numerous suggestions by members of the Association have been made to this committee, all of which will receive due and thoughtful consideration. Those of our members who have ideas even remotely promising, should communicate them to the committee. They will be gratefully received, but without any obligation to adopt them. It is to be hoped that there will be no objection to the proposed revision by any member who has not offered a suggestion remedying the objectionable features thereof. The new version will be published in the JOURNAL prior to its consideration by the House of Delegates.

Our Graduate Courses for This Year were carried out as per program published in the May JOURNAL. According to reports, they were entirely satisfactory, the registration in each instance showing a marked increase over that of the year before. In Baylor University there were 50 registrants as against 22 the year before and 18 the year before that. In the University of Texas there were 63 this year, 53 the year before and 46 the year previous. Dean Moursund of Baylor, in a letter, states that the course in his institution has passed the experimental stage, and that for the next summer he plans to handle a much larger number, perhaps dividing the clinics into two periods of two weeks duration each. Dean Keiller, of Texas, states that those who attended the clinics at Galveston were very enthusiastic and gave close attention to the work. The only ones disappointed whom he knows of were those physicians who attempted to secure advanced knowledge in microscopic and laboratory methods of diagnosis within the brief limits of the course—a physical impossibility. The course on physical diagnosis was the most popular. In Baylor, most registrants attended the scheduled lectures and clinics throughout, but quite a few took special courses, such as eye, ear, nose and throat work, urology, pediatrics, etc.

It is interesting to consider the development of this feature of our Association work. The first clinics were held in the summer of 1922, one at Dallas and one at Galveston. The courses were rather modest, covering the working days of a single week. The experiment was a thriving success, considering that it was the first effort, 18 attending the Baylor course and 46 the Texas course. The project had been under discussion by the State Medical Association for a number of years, and the Annual Session in 1921, warmly approved the final recommendation of our Committee on Medical Education, that the work be undertaken by the State Association, through the Faculties of the two colleges concerned, the whole project to be planned, supervised and controlled by the Board of

Councilors. The October, 1921, number of the JOURNAL discussed the proposition at length, reciting experiments along this line in numerous states. In Nebraska a practical course was given in the Nebraska College of Medicine, covering two weeks, with two hours each day at the bedside in the University Hospital. Fifteen doctors took this course. In Indiana, the Medical Department of the State University gave a six-weeks special course in pathology, biochemistry, medicine and surgery, which was attended by 35 doctors. With these exceptions, most endeavors to re-educate the medical profession were along the well established clinic line, with clinics of one or more days duration each.

The Board of Councilors decided that the best plan under the circumstances would be to have trained teachers of medicine prepare courses of fixed duration, along fixed lines, calculated to cover some definite part of the requirements of the general practitioner who has not been in a position to attend clinics and keep abreast of the times from a practical standpoint. This was done, and success was immediate. The first class in each course adopted enthusiastic resolutions of commendation, and many of those in attendance gave helpful advice in the matter of future courses. In 1923, it was decided to provide a two-weeks' course, which those in charge were encouraged to do by the enthusiastic recommendations of those who had attended previous courses and knew from experience what could be done in one week and what probably could be done in two weeks. The Baylor Dean is now of the opinion that it will be necessary to give two courses of two weeks each, in order to care for the increased demands. It would seem that this is asking too much of the teaching force of any medical college, certainly if the additional work is to be done without pay, but it would be a fine thing for the medical profession of the State. We have made the suggestion before, and would reiterate, that the two great universities concerned might well devote a large part of their extension work to this service, making appropriations to cover the cost of the clinics and pay the teaching force for the additional time and work required.

After mature consideration and in the light of experience, it is our opinion that our plan of re-educating the practicing medical profession is about the best that could be devised. It is subject to some further extension and elaboration, which will come in the course of time. For instance, the medical profession of one or more of the larger cities of the State situated strategically, might organize a course comparable to that given in either of the universities, perhaps abbreviated as to laboratory and technical work but compensating for that by the elaboration of clinical studies. But all of this is for the future, the present seeming to be well provided for.

We extend to the Faculties of the Medical Departments of Baylor University and the University of Texas, our renewed thanks for their services, and compliment them most sincerely upon the results of their efforts.

A Good County Society Meeting.—We, of course, do not desire to make invidious comparisons, but we recently attended a wholesome, helpful and encouraging county society meeting. It was a joint session of the Comanche and Eastland County Medical Societies, held at Gorman, a community in the latter county, near the border. The meeting was conducted by the Eastland County Medical Society, under the efficient management of President Dr. R. C. Ferguson and Secretary Dr. Joseph W. Gregory. It seems that this is an annual affair, and that the medical profession of Gorman arranges all the details, and entertains the visitors. The attendance on this occasion was said to be 46, including visitors. Considering the number of doctors in the county, this must be considered a fine attendance. Of course, it included the Woman's Auxiliary, but that cannot be held to detract from the credit for a large attendance. There were numerous guests from outside of the two counties mentioned, many of whom presented papers and practically all of whom discussed the papers read. The program was entertaining and helpful, and while it covered an entire afternoon, no one seemed to tire. The proceedings were interrupted at one point for a watermelon feast, and were concluded by a chicken dinner. The watermelons were a yard long and all juice, and the chickens were of a special variety, it is said, grown for doctors, who are really entitled to the best in the world. Incidentally, we may say that Gorman has the best hotel for a town of its size we have ever had the pleasure of visiting. The spirit of the occasion was encouraging. The Secretary credited the members of his society with its success in this and other meetings, and the society members insisted that the credit was due the secretary, who has served faithfully in this capacity for eight years. That constitutes a lovely cycle, and the whole idea is commended to our members. Mrs. Editor was with us, and we are going back sometime, unless the other societies of the State keep us busy attending similar meetings.

ORIGINAL ARTICLES

THE OPPORTUNITIES OF THE FAMILY PHYSICIAN.*

BY
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The Family Doctor should be the happiest man alive. The Specialist for efficiency; the Family Doctor for service. The fullest life lived today is that of the physician—not an hour passes without an opportunity to serve. One reason that doctors are the happiest folks in the world, is that they are the busiest workers to be found. If a chance to make money can be called an opportunity, then they have missed it; but service to humanity is a higher attainment than wealth. We physicians have more temptations than most people. It seems that there are more avenues leading from the straight and narrow pathway in our daily walk through life than lie open to the other professions. We have ample opportunities to go wrong but seldom do so. Instead, we walk with God to the bedside of affliction, and administer to more suffering people than all the rest of the world besides. Each office call, consultation and bedside visit, is a golden opportunity in a useful life.

The education of the public on sanitation and preventive medicine, is a problem before us today, so plain, so apparent, so vital, so far-reaching in its consequences, that no one of us can deny that it is our solemn duty to do every thing reasonable and honorable within our power, to bring about a better understanding of the subject, both by our people and our legislators.

To know what to do is wisdom; to do something right is skill. I could go on moralizing until my time is up, but I have two important problems to commend to your most careful consideration. I will not expect all of you to agree with me in the position I take; neither will I grow eloquent or poetical in their presentation. I do not even claim that these two things I shall mention have very much bearing on what my subject may suggest to you. First, there are not enough family physicians to supply the rural needs of this country. Second, how are we to keep the quacks from getting a separate board of medical examiners in this State.

I want to say in no uncertain terms that the medical schools are not making family doctors fast enough to supply the demand. It takes too long and costs too much money to educate a medical student to the point where he can comply with the medical laws of this State. The medical schools are making specialists, who flock to the cities in fierce competition with each other. "Well," you say, "what has that to do with keeping out the quacks? We notice there are more quacks in the cities, where we know there are too many physicians." It is a fact that there are too many physicians in the cities, but they are not family doctors. The few who are doing general practice are, generally, connected with some big clinic.

Fifty per cent of even city people are not for the combine, or the team, or the clinic. They are for the "one-man doctor." Many of them will tell you, "I'm afraid to call a doctor, for I don't want no *x*-ray, nor microscope, nor hospital. I don't want a whole lot of folks foolin' with me; I just want a doctor. There was not much the matter with me, so I just called on the chiroquack, where I had only one to pay." That is the reason the quacks thrive in the cities; there are not enough family doctors.

Please do not get the idea that I would lower the standards of medical education in this country. I would not, but if I had the power to amend our present laws, I would allow any medical student who had made his grades for two years in a reputable medical school, to practice medicine under the supervision of any legalized physician who might need his services, provided the certificate was good for only two years, and not subject to renewal. I would also allow any three-year medical student, under like conditions, to practice independently for a period of two years, when he would be expected to re-enter medical school.

Under such a plan, poor boys who are worthy in every respect, could go to school and make the grade like many of us did, and the rural districts would get a few much needed doctors. Thus we could help keep out the quack, who is coming out in the country just as soon as you and I are dead, or cold on the job. I could place fifty young men within one hundred miles of my home, where each would have three to four times as many people to practice for as were available for me the years I practiced prior to graduation.

It is distressing to us older members of the State Medical Association to read the death notices in our JOURNAL and in *The Journal of the A. M. A.* It is evident that we are dying faster than we are being replaced; especially is this true of the smaller towns and villages. The average age of the members of our County Medical Societies is nearly fifty-two years.

Ever since our ancestors quit climbing and falling out of cocoanut trees, we have had our

*Chairman's Address, read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 29, 1924.

medicine men. The ring-nose Hottentot, the Zulu and our own Redmen have had, and still have, a go-between to protect them from physicial misfortunes and unseen enemies. The doctor idea is the oldest practical thought in history. It came as first aid to our instinct for self-preservation. We are still the medical men of the tribes, scientific physicians, and civilized tribes. We have an educated clientele—educated in law, navigation, clothes, and civil engineering, but not educated in medicine.

I have known mothers who were college graduates, to put urine in children's ears for pain. I have known fathers who were high school graduates to put warm cow dung on open wounds, while I was at home thinking that I was the doctor in the case. I have known the leading lawyer of the town to fight vaccination to the higher courts. I have heard holders of LL. D. degrees praise quackery. We have one United States Senator who believes Mrs. Eddy was a deity. The banker carries an Irish potato for rheumatism; the congressman signs the Tanlax ad., while the legislator votes for the chiro and "totes" buckeyes for piles. You thought, and I thought, that higher education would eliminate all of this. We had an idea that when our own Dr. Graves, and all our other educators, turned out all these five-year M. D.'s, that the people would believe in us. Well, five to eight of these doctors get together in most any big town, and start a clinic, or a team. We rake the woods for patients for them, and what is the result?

The few are overtreated, overeducated and spoiled, while the masses are neglected and untutored. Put the average layman in a clean white hospital, give him a good-looking nurse, let him talk with the wise interne, meet the affable surgeons, and let him be entertained by nine experts from Tuesday to Friday; let him be thoroughly examined from the anterior pituitary body to the posterior coxigeal peduncle; take a speciman of each of his body fluids for inspection; *x*-ray him; get his blood pressure; use the ophthalmoscope, the proctoscope and the microscope; basal-metabolize him; strip him, pound him, punch him, and note his reflexes; take his history from the time his ancestors began to wear clothes up to the last five minutes; make more fuss over him than he expects to get in eternal glory; diagnose him; note his bald head, bias squint, defective septum, turbinates, hyperthyroidism, abscessed molars, submerged tonsils, cholecystitis and chronic appendicitis; operate him, and he will come back home cured—and broke. The family physician who can measure up to that man's estimation of what a doctor should do, has most country doctors bested. That man is so wise that he is rotten. He wants his family doctor to bichloride his hands before he feels the baby's belly. For a while, he blows his nose on antiseptic gauze, and spits in formaldehyd, while reading his fumigated newspaper.

We will have to hand it to the surgeon and the specialist for taking care of us before the Legislature for the past several years. I think I have asked everybody here to refrain from the time-worn custom of criticizing the family doctor in this section. If the city doctors had not taken care of the situation with their time and money, we would be competing with thousands of chiropractors in the smaller towns today. I am trying to tell my friend, the family doctor, that if he does not get busy and use his influence to the best of his ability from this time on, he will be ruined, and the people will suffer more than they believe. If we do not try to get the right men elected to the Legislature from our respective counties, two years from now we will be called the "doctors of the old school" by our new and unprincipled competitors. We will be walking down the aisle extending them the right hand of fellowship in church, or maybe having them teach us the secret tokens and pass-words of the leading lodge in our respective towns.

If only two doctors in each county medical society would see to it that all the doctors, the members of the Auxiliary and the druggists in the county, were organized into one fighting unit, which would fight for the right man for representative, there would not be enough chiroquack lovers in Austin the next session of the Legislature, to organize a poker party. There is not a family doctor worth mentioning, who has had ten years experience in Texas, who cannot vote twenty-five men, and twice as many women. That makes seventy-five votes, plus those of the doctor and his wife, which makes seventy-seven for each member of the county medical society. That will carry most any county the right way.

The public does not take the science of medicine seriously, and probably never will do so; but please get this idea clear, they take *you* seriously, and very seriously at that. And why shouldn't they? Even a dog knows his friend. I honestly believe that any doctor in Texas can get twenty-five per cent of his clientele to vote right if he will go to them, and ask it in a kindly way. I learned in the Army that if I wanted anything, I had to ask for it; and I have learned outside the Army that other people will do darned little for the doctors of this State. I have come to the con-

clusion that if we, as a profession, get anything, we will have to fight for it.

These patrons of ours run off after quackery sometimes. They are more like our disobedient children; they like to show their independence. It is not so much that they do not honor and respect us, as it is a spirit of adventure. Sometimes we have failed to relieve them; or maybe we have failed to take proper interest in them. I know you will agree with me when I say that they come to us when they are in serious trouble. God has placed in every normal mind an emergency judgment, which seldom fails to make us appeal to those who can best render aid. When the death angel is near, when faces are pale, when tear-stained eyes are anxious, when the heart throbs with fear, a call goes out for the family physician. We respond to the appeal no matter how many quacks they have patronized, and rush into the home of distress, there to meet God at the bedside of the injured or the seriously afflicted. There is no greater opportunity given any man; there is where we meet with friendship and confidence—a golden opportunity, indeed!

On every farm, in the homes of village dwellers, on the creeks, in the rented hillside home, there lives some country doctor's friend. Maybe he went to see the quack; maybe he said mean things about the medical fraternity; he probably voted for the wrong man. No matter, he is loyal to his dog, his home, his doctor and his God. He is the man you and I must go and see. We must tell him what we want and if he fails us, then I am brain-surgeon to President Coolidge. "Yes, Doc., I'll do just what you say. I don't know nuthin' 'bout your health laws, but I know you, Doc., and I am for what you want." I may be wrong, but I believe that when you and I climb down off our perch, and tell our patrons what we want, we will get it.

We have sat back on our dignity until we need blue-jay corn plasters under our patches. We do not advertise; we do not talk, except about and against one another; we will not pay anyone else to help us. We will not quit the office long enough to go and see this candidate for the Legislature, and have a talk with him, even when he is in town. In the name of high heaven, what claims have we then, other than the individual love, honor and respect our patrons have for us?

Fighting quackery by telegram and long-distance 'phone, is over. No longer can a handful of leading doctors and surgeons keep down the plague. "Oh, hell! I will not mess with politics," says Doctor Let-'em-alone, "I will not ask anybody to vote." All right, doctor, let me make a prophecy. Two years from now, some chiro will be leading your prayer-meeting in your home town and in your church, and he will not ask you to lead in prayer, either.

Ask one or more of the leading doctors who packed sand bags at Austin to keep the floods off of you and me why we had a majority, and why the Medical Practice Act was not injured during the last two or three sessions of the Legislature. They will tell you that most of the legislators told them that they had heard somehow that to change the Medical Practice Act would hurt the feelings of their family physicians at home. Heard *somehow!* Ye gods and little chiropractors! *Somehow!* Think of it!

I want every doctor here to pledge me that when this next Legislature meets in Austin, there will not be a mother's son among the law-makers, or law-wreckers, who will not hear, see, smell, taste and know full well that we will hurt *their* feelings if they in any way please the wolfish quacks who trail, bay and cut the throats of every progressive, life-saving, public-health law which hinders their false methods, money-getting schemes and death-dealing remedies.

INTESTINAL OBSTRUCTION.*

BY

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Because intestinal obstruction remains the most fatal of the acute intra-abdominal crises, I am of the opinion that opportunity for discussion of the subject should be given in a meeting such as this, and not confined almost exclusively to congresses of surgeons, or societies of experimental physiologists.

Certainly, much is to be accomplished by surgeons in stabilizing the methods of handling cases of obstruction. The advantages of enterostomy are overlooked; operations on very toxic patients are prolonged; local anesthesia is too rarely employed, and there is too great delay in diagnosis.

The physiologists are giving us, by their continued research in the blood chemistry of intestinal obstruction, great hope that in the near future they will bring to our aid an antitoxin or a neutralizing solution with which it will be possible to combat the toxins absorbed early in the disease. Under our present management, a lethal dose may have been effected, before the diagnosis is certain, surgical intervention coming too late.

However, the greatest responsibility falls upon the family physician or the surgeon who

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, May 1, 1924.

first sees the case. If the diagnosis is made early and operation advised and performed, many cases will be saved that are now sacrificed by delay.

I think it should be understood that intestinal obstruction rarely develops from a cause that is remedied by any form of treatment other than surgery. Therefore, if intestinal obstruction is suspected, what should be our advice and plan of procedure? A good plan is as follows: (1) No purgatives; (2) no opiates; (3) try enemas and hot turpentine stupes for relief, and (4) if not relieved after two or three hours, the patient should be taken to a hospital and, under the proper conditions, the obstruction relieved by operation.

Not until we follow, some such plan as above outlined, in all cases of suspected obstruction, will our present high general mortality of 50 per cent be reduced. The records of Baylor Hospital show that during the past five years there have been admitted 39,668 medical and surgical patients. Of the total number admitted, 27,712 were surgical patients, of whom 65 were suffering from intestinal obstruction. There were 55 cases of acute obstruction, with 19 deaths, and 10 cases of obstruction due to carcinoma of the bowel, with 4 deaths. The etiological factors may be listed as follows: Post-operative adhesions, 17; complications of appendicitis, 11; complications of operations in the pelvis, 9; volvulus, 6; fecal impaction, 3; strangulated hernia, 3; Meckel's diverticulum, 2; tumor—lumen of ileum, 1; dynamic ileus, 1; mesenteric thrombosis, 1; gastro-enterostomy, 1; and cancer of the large bowel, 10.

Intestinal obstruction is an arrest of the fecal current as it passes down the lumen of the bowel, and there are two general types. First, there is the obstruction due to paralysis, reflex or toxic in nature, or to a spastic contracture of the bowel. It is thought that from 60 to 70 per cent of all cases of obstruction are due to non-mechanical or "dynamic" causes. It is these cases that recover as a result of medical treatment and operation is rarely necessary. Second, intestinal obstruction due to mechanical causes, such as adhesions or bands, inflammatory exudates, twists or kinks in the bowel, tumors of the bowel, etc. Here it is that procrastination and illogical reasoning leads to neglect and complications of gangrene, perforation and peritonitis, which, when added to the toxemia developing from the obstructed loop, raises the general mortality rate enormously. This type of obstruction always calls for surgical relief, and it is differentiated from the dynamic type by the sudden onset and severity of the symptoms. Therefore, when the responsibility is yours, and the diagnosis seems unquestionable, why wait until the patient's condition is critical before advising an operation which is inevitable?

The symptoms of acute intestinal obstruction are conveniently divided into three stages. The first of these is called the stage of onset, when the symptoms are due to the arrest of the fecal current. These symptoms are, pain, constipation or diarrhea, and vomiting. The pain is paroxysmal, with quiet intervals, but rapidly becomes more frequent and more severe. At first there is no distention and the abdomen is soft. Vigorous peristalsis, fading away at a given point, which may be localized by the stethoscope, will frequently determine the site of the lesion during the first hour. The pain is not relieved by a bowel movement, or by vomiting. There may be several bowel movements preceding or following the onset of pain, followed by constipation; or, in some instances, constipation is complete from the beginning. Vomiting may precede, but usually follows, the initial attack of pain. At first the vomiting is of gastric contents; in an hour or so the vomitus becomes bilious, and, gradually becomes intestinal or stercoraceous. The blood pressure rises at first, but with the beginning of absorption of the contents of the obstructed loop, the blood pressure falls.

In the second stage, the cramping pain becomes more intense, there is definite fecal vomiting, visible peristalsis, and distention becomes pronounced; distended coils of the intestine can actually be felt. If a portion of the bowel becomes gangrenous, the pain diminishes. There may be localization of the pain, due to leakage at the site of the obstruction and beginning peritonitis.

The symptoms of the third stage are due to toxemia, gangrene, peritonitis, liver and kidney insufficiency. A patient may die of toxemia within 24 hours, or may live for days. The higher the obstruction the more virulent the disease. Experiments have shown that from 5 to 8 cc. of the contents of an obstructed loop of small bowel, when injected into the blood stream of a dog, will cause the death of the dog from a similar toxemia in about 5 hours. It is estimated that less than 10 cc. of this material is a lethal dose for a human being. In some instances, 800 cc. of this poisonous fluid has been removed from an obstructed loop of bowel. Attempts have been made to thoroughly evacuate and irrigate an obstructed loop of bowel. Following such an attempt, after the most careful technique had been used, it was possible to obtain 10 cc. or more of this toxic material from the glands and folds of mucous membrane of the bowel.

In view of these facts, it must be plain that unless acute intestinal obstruction is diagnosed and operated upon early, the outlook is poor unless the physiologists come to our aid with an antitoxin or a neutralizing solution which will care for the patient during the time that the obstruction is being relieved, and the normal function of the bowel restored.

SUMMARY OF 19 DEATHS.*

Case No.	No. of Days Sick	Purged	Opiates	Condition of Patient	Anesthetic	Condition Found	Operation Done	Length of Operation	Liver After Operation	Leucocytes Before Operation
1	Several	X	Yes	Critical	G. & E.	Volvulus	Relieved volvulus	1 hr. 15 min.	1 day	15,000
2	Several	X	Yes	Poor	G. & E.	Bands and Adhesions	Released adhesions	1 hr. 10 min.	35 hrs.	.....
3	7	X	X	Bad	Not Noted	Gangrenous bowel	None	Not noted	1 day	13,000
4	Several	X	Yes	Serious	G. & E.	Adhesions	Freed adhesions	Not noted	8 hrs.	.....
5	Several	X	Yes	Critical	G. & E.	Mesenteric thrombosis	Colostomy	20 min.	3 hrs.	.....
6	0	X	Yes	Poor	G. & E.	Pus-tubes and adhesions	Removed tube; released adhesions	45 min.	2 days	.....
7	Several	X	Yes	Poor	G. & E.	Volvulus and gangrene	2 cigarette drains	30 min.	10 hrs.	.....
8	Several	X	Yes	Bad	G. & E.	Operation 5 days ago. Adhesions	Released adhesions	40 min.	1 day	.....
9	Several	X	Yes	Bad	G. & E.	Postoperative adhesions	Drained common duct	1 hr. 15 min.	2 days	8,900
10	1 day	0	0	Fair	G. & E.	3 ft. of bowel. Gangrenous.	Resection of bowel	Not noted	4 days	.....
11	5	0	X	Poor	G. & E.	Volvulus; appendec'y 5 days ago	Relieved volvulus	45 min.	5 days	.....
12	0	X	X	Acute	G. & E.	Gangrenous appendix and obstruction	Drainage	1 hr.	6 hrs.	.....
13	Several	X	X	Bad	G. & E.	Strangulation; perforation	Released band; closed perforation		1 day	.....
14	5	X	X	Bad	Local	Gangrene and volvulus	Enterostomy	20 min.	5 hrs.	14,000
15	2	X	X	Bad	Local	Strangulated hernia	Enterostomy	.....	24 hrs.	.....
16	Several	X	X	Critical	Gas	Adhesions	Enterostomy	15 min.	3 days	19,500
17	Several	X	X	Critical	G. & E.	Adhesions	Released adhesions	.....	On table	.....
18	Several	X	X	Bad	G. & E.	Adhesions	Iliostomy	.....	10 hrs.	15,000
19	2	0	X	Bad	G. & E.	Abscess and adhesions	Enterostomy	1 hr. 10 min.	1 day	.....

*Nineteen deaths in 55 cases of acute intestinal obstruction, a mortality of 34.55 per cent.

A glance at Chart No. 1, which summarizes the 19 deaths occurring in this series of cases of acute intestinal obstruction, shows that the operations lasted from 15 minutes to 1 hour and 15 minutes, and that nitrous oxide gas and ether was used in all cases but three. Two cases were operated upon under local anesthesia, and in one case, the anesthetic is not stated on the chart. The chart also shows that more or less extensive operations were performed on all cases. Enterostomy, following release of adhesions, was performed five times. No case was recorded where enterostomy alone was performed. It is interesting to note that 12 of the deaths followed within 24 hours of the operation. Where blood examinations were made, all cases showed a leucocytosis of 10,000 to 18,000.

All cases were operated upon after their physical condition was declared critical. Symptoms of obstruction had developed from 48 hours to 7 days previous to operation. Five of these patients were in the hospital when the obstruction developed, and operation was delayed for more than 48 hours in each case.

If the records of the fatal cases in this series are carefully examined, the following interesting and instructive facts are brought out:

1. All cases had been sick for several days; therefore, the delay in diagnosis and consequently the postponement of operation, convicts the medical adviser of poor judgment.

2. Practically all patients had been purged, thus accounting for perforations, gangrene and peritonitis.

3. Most of the patients had been given opiates, which masked the symptoms, gave false security and delayed surgical intervention.

4. The physical condition of every patient was critical when he finally came to operation, which was unfair for patient and surgeon alike.

5. Sixteen of the nineteen patients were given gas and ether anesthesia, which contributed vasomotor changes and shock. (What part general anesthesia plays in the metabolic economy under such unfavorable conditions is not known.)

6. Operation revealed difficult technical problems in every case, which were simple conditions early in the disease and could have been quickly and successfully dealt with in most instances.

7. Even with knowledge of the patient's

critical condition, every surgeon felt called upon to do an extensive operation.

8. The operations were prolonged, varying from fifteen minutes to one hour and fifteen minutes. Simple enterostomy, under local anesthesia, can be performed in fifteen minutes. This operation, alone, was not performed on any of the fatal cases.

9. Fourteen of the nineteen patients died within twenty-four hours of the operation, which means that the surgical management of such cases is still unsatisfactory. The delay in diagnosis and in advising operation in acute mechanical intestinal obstruction, is the first great mistake. At operation, too much manipulation, with accompanying shock, defeats the surgeon's efforts and robs the patient of a chance to come back.

RECOMMENDATIONS.

I have treated five consecutive cases by release of adhesions and enterostomy. All five were critically ill at the time of operation; there was nausea, vomiting, severe cramping and abdominal distention. Gas or gas and ether, was used as the anaesthetic. Adhesions were released and enterostomy performed in each case, with recovery of the patient.

Gastro-intestinal *x*-ray examinations of three of the cases above mentioned, showed no constriction of the bowel or adhesions to the abdominal wall where the enterostomy was performed. The barium meal was delayed in the terminal ileum in each instance, but passed into the caecum and large bowel without interference.

Therefore, from my experience in treating these recent cases and others, together with a critical study of the hospital series, I would advise handling cases of acute mechanical obstruction in the following manner:

1. If the case is diagnosed and operated upon early (in the first eight hours), and the obstructed loop of bowel is viable, the bowel should be released and the abdomen closed without drainage.

2. If the obstruction has existed for several hours and the patient is showing signs of toxemia, the bowel should be released, if that is easily accomplished, and enterostomy performed.

3. If the patient is very toxic, even though obstruction has apparently existed for only a few hours, enterostomy alone should be done, and preferably under local anaesthesia, with the least amount of manipulation. On the eighth or tenth day the enterostomy tube should be removed if the patient's condition warrants it. Following this procedure, if the enterostomy opening closes and the obstruction seems to be relieved, no further interference should be attempted. However, if the sinus fails to heal and no fecal matter passes through the natural channel, this is rather positive evidence that the obstruction has not been relieved, and it will be necessary to open the abdomen through a second incision and release the obstruction. As soon as the fecal current is normally established, the enterostomy opening will close.

4. Where there is a gangrenous bowel and the patient's condition is critical, the gangrenous bowel should be quickly excised, the blood-vessels tied, and enterostomy performed. Later a reconstruction operation should be performed.

5. The enterostomy opening should be low and as near the site of obstruction as possible. If the bowel is anchored to the incision and the enterostomy tube fixed by a silk worm suture passed through the fascia and tube, the tube can be removed when desired, by removing this suture. Drainage of the abdominal cavity is not necessary, unless there has been leakage.

ABSTRACT OF DISCUSSION.

Dr. Penn Riddle, Dallas: Sodium chloride is the first drug that has been successfully used in combating the toxemia in acute intestinal obstruction. The general concensus of opinion as to the nature of the toxemia, is that it is a chemical change. Numbers of investigators have sought for an antitoxin to combat the toxin. It has been found that a fall in the chlorides and a rise in the non-protein nitrogen, are the fundamental changes that take place in the blood in acute intestinal obstruction. This is especially true in the more rapidly fatal type, namely, obstruction in the upper tract.

Sodium chloride may be given in strengths varying from 3 per cent to the so-called physiological solution. It may be given intravenously, subcutaneously, per rectum, by mouth, or through an enterostomy tube. The quickest effect is gotten intravenously. Dogs with duodenal obstruction have been kept alive for 27 days by the daily subcutaneous injection of physiological sodium chloride solution.

Dr. T. C. Gilbert, Dallas: Dr. Flynn has placed emphasis upon one of the salient points in the treatment of this most dangerous and important emergency. It is encouraging to surgeons to note the general improvement in the mortality rate in this condition, during the last few years. Obstructions, and particularly postoperative obstructions, will clear up after enterostomy and not require a subsequent operation. Notwithstanding the long time that enterostomy has been practiced, it has been too little used, but in recent years it is finding more wide-spread favor, and with its increasing use has come the fall in mortality.

It is well also to mention the injection of hot fluids through the enterostomy, at periods of three or four hours. This procedure has the advantage of supplying fluids, but probably its greatest advantage is in the washing out of the toxins from the intestinal tract. If the fluid either returns through the enterostomy or is vomited, detoxication is facilitated. The intestine is stimulated to contraction by the hot water, which probably assists in the pre-

vention, if not the treatment, of one of the most perplexing problems of surgery, ileus.

Dr. Flynn (Closing): The members of this section are keenly alert to the danger of postponing the diagnosis and operation in acute intestinal obstruction. Enterostomy is being performed more often than formerly in the treatment of this serious condition. Doctor Wilson has recommended high enterostomy, but I am of the opinion that the enterostomy should be just above the obstruction—wherever that may be. Certainly, too many pelvic conditions and too many cases of acute appendicitis without leakage or rupture are being drained, which unquestionably increases the occurrence of intestinal obstruction. The surgeon should, therefore, consider very carefully the postoperative complications which come from unnecessary drainage of the abdominal cavity.

IMPERFORATE ANUS WITH REPORT OF THREE CASES.*

BY

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The anomaly of imperforate anus occurs rarely, but, unlike many congenital defects, it constitutes an emergency of the gravest order. It is, therefore, a class of malformation with which not only the surgeon but the general practitioner must be prepared to deal. To do this safely, a clear understanding of the anatomical variations of the parts above the anal canal is essential.

In no region of the body is the development more difficult to interpret. Only the study

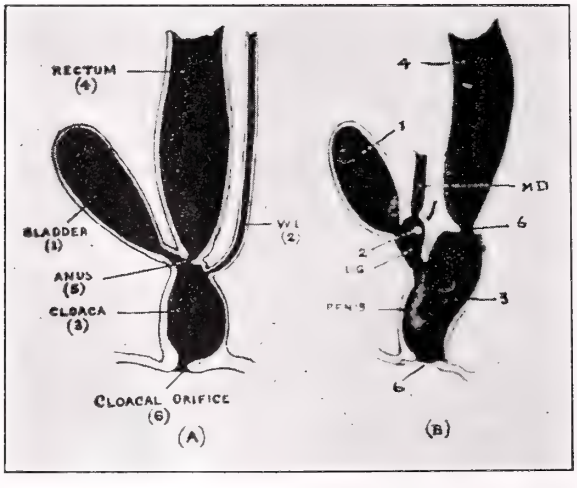

FIG. 1. Diagram from Keith to show the cloaca of lower vertebrates. A—Frog. B—Tortoise. (1) Bladder; (2) Wolffian duct (ureter and vas); (3) Cloaca; (4) Rectum; (5) Intracloacal anus; (6) Cloacal orifice.

of comparative anatomy has enabled embryologists to comprehend the sequence of events that lead to the formation of the normal rectum and the various anomalies occurring in this situation. The changes that occur will perhaps be best understood by a study of diagrams illustrating different stages in development. In the very young embryo the posterior part of the primitive intestinal tract (the hind gut) expands caudally into a cavity which represents both primitive bladder and rectum, corresponding to the cloaca of lower vertebrates. (Fig. 1.)

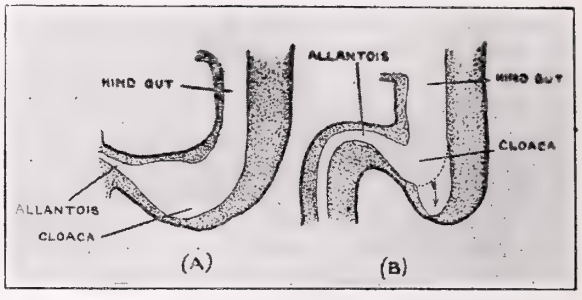

FIG. 2. The formation of the cloaca from the hind gut, in a human embryo during the third week. (After Keith.)

The cloaca, however, is at this stage a closed cavity, into the anterior part of which the primitive urinary ducts (wolffian ducts and ureters) now open. (Fig. 2.)

At a slightly later date, this cavity is separated into two portions by a down growth of mesoderm, the urorectal septum. As the septum extends caudally, the posterior part of the hind gut is gradually cut off from the anterior. The posterior chamber forms the rectal canal and the anterior chamber, the urogenital sinus. (Fig. 3.)

While these internal changes are taking place, an ectodermal depression forms in the perineum and becomes gradually deeper until it comes into contact with the floor of the urogenital sinus and of the rectum. Finally, only a thin membrane, the cloacal membrane, separates the external depression and the internal urogenital and rectal cavities. The cloacal membrane breaks down anteriorly and the urogenital sinus is for a short period open to the exterior through a narrow slit in the perineum. Meanwhile, two lateral folds make their appearance and grow over the median slit, uniting posteriorly with each other and with the urorectal fold, in such a manner as to shut off completely the posterior anal part of the perineal depression from the anterior urogenital portion. The anal depression now becomes deeper and approaches the blind extremity of the rectum (hind gut). Finally, the posterior part of the cloacal membrane, which has separated the anal pit from the rectal cavity, breaks through and communication is established between the intestine and the exterior. The line of fusion of the anal pit and the rectal canal, persists in the adult as the white-line of Hilton. The sphincters, both external and

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, May 1, 1924.

internal, develop in connection with the ectodermal pit. (Fig. 4.)

The formation of a complete outlet for the colon, therefore, depends upon the descent of the rectum (hind gut) and the ingrowth of the anal pit, the fusion of these canals, and finally the dissolution of the cloacal membrane separating them. The closure of the communication between the rectal canal and the genitourinary passages within the pelvis, depends upon the satisfactory down growth of the urorectal septum. The closure of the communication between the anal canal and the urethral or vulval outlet externally, is dependent upon the posterior fusion of the lateral vestibular folds with each other and with the urorectal septum. With such a complicated developmental mechanism, it is surprising that defects are not more frequent.

A study of the factors involved will make it apparent that an imperforate anus may

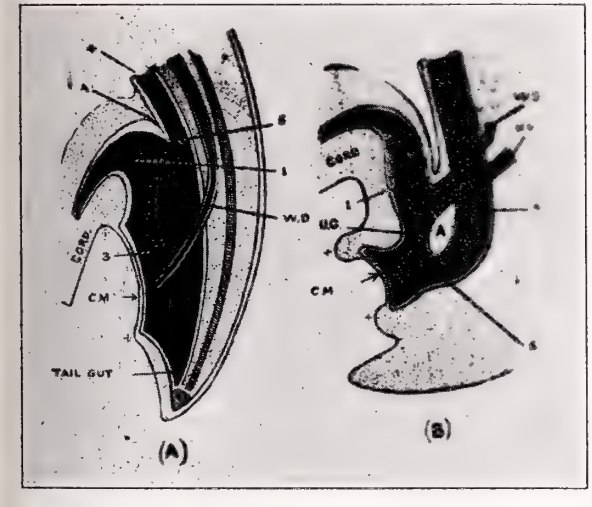

FIG. 3. Showing the separation of the rectum from the urogenital sinus. (1) Bladder; (2) Wolffian duct; (3) Entodermal cloaca; (4) Rectum; (5) Anus. C. M.—Cloacal membrane. U. G.—Urogenital sinus. A.—Urorectal septum.

mean anything from the mere persistence of a cloacal membrane to a total lack of development of the rectal or the anal part of the canal. Moreover, the condition may be still further complicated by the presence of sinuses leading to the bladder, urethra or genital passages. It will be readily seen that individual cases may present wide variations. Many of the classifications of this condition are so complicated that they are categories of possible varieties rather than classifications.

From the embryological point of view, all cases fall into one of the following three classes:

1. The hind gut is normal but the canal is defective or absent;

2. The hind gut is imperfect in development and may or may not communicate with the genitourinary passages, but does not communicate with the anal canal, though the latter is normal; and

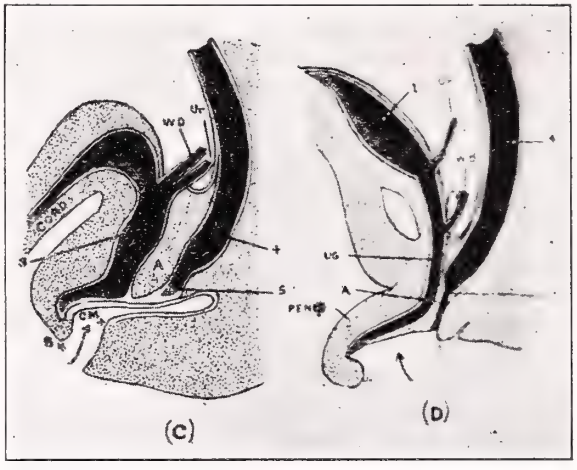

FIG. 4. Further stages in development. The lettering corresponds with that in Fig. 3 (Keith).

3. Both the hind gut and the anal canal are defective.

Unfortunately, it is frequently difficult or impossible to determine until after operation, into which class a given case falls, and the clinical value of such a classification is greatly decreased. By bearing in mind the possible range of deformity, however, the operator may grasp more easily the significance of small signs, and be saved from unnecessary mistakes. In so brief a discussion, it is not possible to enter fully into the question of the many variations which may be found.

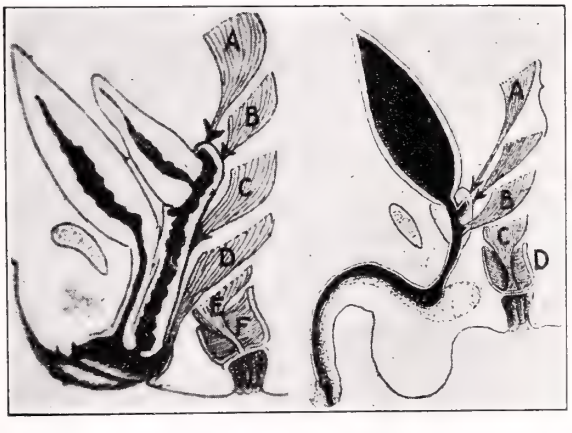

FIG. 5. Diagram showing the termination of the rectum in 25 female infants with imperforate anus, dissected by Keith. A=5 specimens; B=2 specimens; C=2 specimens; D=6 specimens; E=5 specimens; F= 5 specimens.

FIG. 6. Diagram showing the termination of the rectum in 54 male infants with imperforate anus, dissected by Keith. A=7 specimens; B=33 specimens; C=7 specimens; D=7 specimens.

Keith, in 1908, dissected and described 114 specimens of imperforate anus which he was able to procure from London museums. He

grouped the more usual abnormalities which he found into two diagrams, according to the sex of the infant. (Figs. 5 and 6.) These diagrams are of the greatest interest and value, as they present immediately to the eye the possible complications to be expected. For the purposes of his discussion, he represents the anal pit (proctodaeum) as normal in the drawings, but explains in the text that in a large proportion, the anal pit was absent or defective. Superficially, it would seem that the patient with a normally formed anal pit has a less serious deformity. This is not always the case, however. In many instances where the external parts are normal, the failure to form a satisfactory vent for the colon is due to a marked defect of the hind gut. Under such circumstances, the colon may terminate high in the abdomen; it may be separated from the anal canal by peritoneal folds, or it may end, as shown in Keith's diagrams, in the urinary or genital passages. In the male, this is a particularly serious complication, but in the female the opening by vagina or vulva may be easily accessible, and dilatation of this opening, by nature or by instrumentation, may be life-saving.

CASE REPORTS.

My first case illustrates the value of vaginal fistula in a case in the third group, where both rectum and anus are defective.

Case No. 1.—B. P., a female, colored, aged two months, had no depression of any kind in the anal region and the bowel movements passed by means of an opening low down in the vagina. This opening was so small that the infant strained until cyanotic, in the effort to empty the bowel; but in spite of this and of a constant distention of the abdomen, the child was well nourished and had gained steadily in weight. The absence of any anal depression gave little trouble in the operative treatment of the case, for it was possible to pass a sound into the vaginal fistula, depress its end posteriorly, and use this as a guide in dissecting from the perineum to the rectal canal. The operation was performed by Dr. J. E. Thompson, and the artificial anus sutured to the exposed mucous membrane of the rectal canal. A rubber catheter was used for the first few days, and for some weeks after the operation, the child was treated by digital dilatation in the Out Clinic. When it was last seen, the rectovaginal orifice was almost completely closed.

The second case presents a similar anatomic condition, occurring in a male. Here the opening between the rectum and urogenital sinus was by means of a passage through the prostatic urethra. The extremely narrow, long outlet was totally inadequate to give any relief to the obstruction, and was inaccessible to the operator.

Case No. 2.—W. H., male, white, was delivered two days before admission to the hospital. The malformation of the anus was not recognized by the undergraduate attendant. On the day after birth, castor-oil was given by a neighbor because there had been no bowel action. Following this, the baby vomited meconium and became greatly distended.

The patient was brought into the hospital in a serious condition, and was operated upon by Dr. J. L. Jinkins on the afternoon of the day of admission. An effort was made to reach the rectum from the perineum. No dimpling or other indication of the anal orifice was apparent, and the attempt to reach the bowel by this route was abandoned. A median laparotomy incision was made, and the presenting distended loop of colon brought out. Careful examination could not be made on account of the serious condition of the patient, and because of the distention, but the operator believed that the colon ended at the level of the pelvic brim in the median line. The presenting loop of sigmoid was brought out of the median incision and, after closure and careful protection of the wound an opening was made to relieve the acute symptoms. As a result of the immediate opening, infection occurred and delayed the healing of the wound. This probably accounts for the retraction of the colon which occurred later. The baby was breast-fed throughout its convalescence, and in five weeks was taken home.

He was readmitted two weeks later, because of closure of the sigmoid fistula and obstruction. This was relieved by enemata given through a small catheter passed into the fistulous opening in the bowel, which treatment was continued daily for four weeks, during which time the baby's general condition improved greatly. During this time it was observed that when the bowels did not move thoroughly well through the fistula, small fecal deposits were passed by the urethra. The mother recalled that there had been some similar material passed in the urine before the original operation, and again when the postoperative obstruction first appeared and before readmission to hospital.

An *x*-ray was made with a probe passed down through the fecal fistula. The end of this was seen close to the pelvic floor.

At the age of nine weeks, an operation was performed by Dr. J. E. Thompson, with a view to closing the fecal fistula and bringing the bowel down to the normal anal position. An incision was made along the previous incision and circling the fistulous opening. The fistula was found to enter the upper part of a redundant sigmoid flexure, which was adherent to the bladder as a result of the previous operation. A finger was passed down the fistulous opening towards the caudal end, which was large and fairly low down. An opening was then made in the position of the anal dimple below and only scar tissue was encountered. This opening was extended upward until the lower end of the colon was reached. The colon was opened and sutured to the skin of the anal region and a tube passed up and guided by the hand in the abdomen to the splenic flexure. The fistulous opening in the sigmoid was sutured and the abdomen closed.

The baby left the table in a condition of shock from which it never recovered, and death followed ten hours later. During the hours after operation there was free passage of gas and feces from the rectal tube, and considerable fecal matter in the urine.

At post-mortem examination, the lower part of the sigmoid, about one inch above the terminal blind pouch, showed a transverse suture line corresponding to the fistula made at the first operation and closed at the beginning of the second. The bowel here was large and its mesentery long and free. The rectal canal below this level was about one-half inch in diameter, and at the lower end for about one-half inch, its wall was very thin. The blind end had been opened at operation and pushed down into the ischio-

rectal fossa and sutured to the skin. The tissues of the fossa had been opened to admit of its passage, as high as the level of the lower pole of the prostate anteriorly and for a greater distance posteriorly. On opening the rectal canal in the mid-anterior line, a pit was found, into which the folds of mucosa turned anteriorly, instead of passing longitudinally down, as in the remainder of the canal. A fine probe passed into this pit entered the prostatic urethra, and the fistula was found to be lined by delicate mucosa, shown in the photograph. (Fig. 7.)

The third case illustrates more pronounced failure of development of the urorectal septum, with persistent communication between the rectum and the posterior urethra, combined with imperfect development of the anal pit.

Case No. 3.—E. D., was a white male, aged 3 years. He had an imperforate anus, presenting a dimple only in the position of the anal depression. The attending physician made an opening in the anal region a few days after the baby's birth, and succeeded in entering the rectal canal. This opening was dilated from time to time, but rapidly contracted between treatments, so that much of the time the passage of feces was rather difficult. The parents brought the child to the hospital because of intense pain on attempts to empty either its bladder or bowels. They said that nine months previously a similar attack of pain had occurred, which was not

FIG. 7. Photograph of Case No. 2, showing the turning in of folds of mucosa lining the sinus between prostatic urethra and rectum.

relieved until the child passed a concretion by the urethra. On examination this concretion proved to be a small fruit seed covered by phosphates. This statement is probably correct, as the child has passed urine and feces from both the urethra and the artificial anus throughout its life.

Examination under an anesthetic showed an opening between the posterior urethra and rectum, into which the little finger passed easily. The artificial anus was cicatrical, but appeared to be sufficiently large. There was no evidence of sphincter contraction on the examining finger. The baby was said to have "some control," but what little there was must have been due to the scar tissue, or to the inhibition of normal peristalsis in the colon. The posterior urethra (or base of the bladder—it was not possible to determine which) contained a phosphatic calculus the size of a walnut, which had evidently formed about fecal deposits. This calculus was pushed through the sinus between the urethra and rectum, and removed per anum.

The parents refused to submit the child to further treatment or observation. We were anxious to try the effect of systematic bladder irrigation, dilatation of the anus, and other hygienic measures, in the hope that the sinus would begin to close spontaneously. Of course, no plastic operation could have been attempted until the parts were much larger. Efforts to trace the patient have failed, but the prognosis under the conditions present was grave. The child could hardly escape ascending infection.

TREATMENT.

Abstract information as to causation and types of defects, is interesting, but the doctor constantly facing the problems of sickness and suffering, demands something more than scientific interest. He wants to know how the information that he may acquire can help his patient. Confronted with a case of imperforate anus, what shall he do, and why? Relief of some sort is imperative.

In the simplest case, where only a cloacal membrane separates a well formed anal pit from a properly developed rectum, puncture of this membrane is all that is necessary. Even so simple an operation as this, however, should be done with a knife and *under the eye,* not with a trocar, by sense of touch. Even in a distended abdomen, the last part of the rectum may not be ballooned out, or the membrane may be thicker than it appears to be, and the trocar may penetrate along the side of the rectum before or after entering it, and, while affording immediate relief, produce death from infection later. Even if no anal depression is present, careful knife dissection in the perineum will often disclose the rectum in its normal position. (Fig. 8.)

However, there is always the chance that the rectal canal has not developed properly, and in such cases it is extremely important that information on this point be obtained, if possible, before commencing the operation. If *x*-ray facilities are available, and there has been time for gas to accumulate, the gas may show the lower limit of the rectum. Opaque meals or injections are, by the nature of the case, impossible. Occasionally, the urorectal septum, in separating the rectum from the urogenital sinus, carries too deeply with it the peritoneal covering which forms the pouch of Douglas in the female and the vesicorectal fossa in the male. Under such circumstances, the peritoneum may pass under the lower extremity of the rectum and

the peritoneal cavity may be entered in the attempt to reach the rectum from below.

There is seldom any way by which the operator can obtain information on this point before he commences his dissection, and his only safeguard is to bear this danger constantly in mind, and be prepared to protect the peritoneal cavity from infection, should he inadvertently or of necessity enter it. Occasionally, evidence of communication with the urinary or genital passages, will yield very valuable information on this point. In the examination of such a case, the dis-

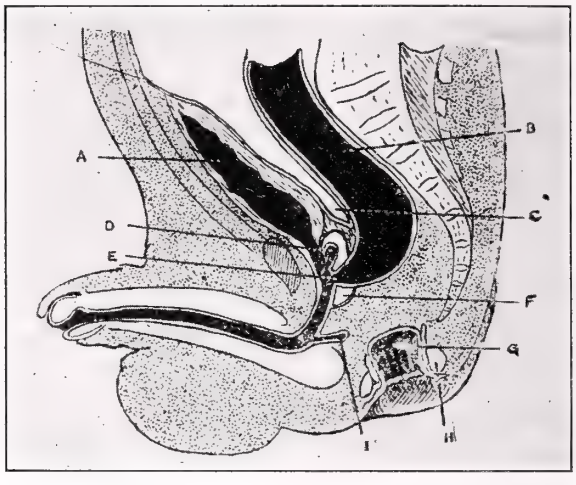

FIG. 8. Diagrammatic representation of the condition present in a male infant. (Keith.) Anal pit well formed; rectum communicating with prostatic urethra. A—Bladder; B—Rectum; C—Recto-vesical pouch; D—Uterus masculinus; F—Prostate; G—Proctodaeum or anal pit; H—Sphincters.

charges from the bladder must be most carefully examined, as they will in many instances show traces of meconium. If such traces are present in the male, or if there is evidence of a vulval or vaginal sinus in the female, the operator may confidently expect to find the rectum in the sacral concavity, and may by persistent, careful dissection, facilitated if need be by the removal of the coccyx, establish a fistulous opening between the perineum and rectum, whether or not an anal canal is present.

If no such indication of the proximity to the urogenital sinus is present, and the operator is unable, after reasonable effort has been made, to reach the colon, he will be unable to judge how far the rectum may be from the perineum and will probably need to resort to left inguinal colostomy, to alleviate the immediate symptoms. These cases are frequently in very bad condition before operation is attempted, and under such circumstances, the certain relief by colostomy offers many advantages. Also, the condition of the parts below may be revealed later by radiograms, barium being given through the colostomy opening per catheter.

If colostomy is performed, it should be through a left McBurney incision, and care should be taken to anchor the loop of bowel to the peritoneum, lest retraction take place later and a secondary operation be required before the age of the child justifies it. The treatment does not, however, cease with the immediate relief of the obstruction. The opening in the colon must be watched, and dilated from time to time. This is necessary in case colostomy is performed, and it is even more needful if the anus has been artificially made in the normal position, for cicatricial contracture is very apt to occur, and can be prevented only by the most assiduous care.

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RAISING THE STANDARD OF OBSTETRICS IN TEXAS.*

BY

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SAN ANTONIO, TEXAS.

Reviewing the statistics of the mortality, to say nothing of morbidity of childbirth, one is appalled and humiliated by the comparison with the statistics of other countries. In surgery and in other branches of medicine, our records compare favorably with those of any country, but we rank fourteenth in maternal deaths due to puerperal sepsis, only two countries (Spain and Switzerland) having a higher death rate than ours.

Welfare workers, with their idealistic views of motherhood, have taken it upon themselves to make laws to better these conditions in this country and to deal with these problems without the counsel or endorsement of the medical profession. This is resulting in political control under wrong auspices, under laws which should have been made by the profession and kept under their control. The Sheppard-Towner law has been accepted by most of the states. Many of our leading obstetricians, although they feel that medical laws should be made and endorsed by the profession, gladly aid any movement that will elevate obstetrical practice. There is no doubt but that the present low standard of obstetrics will be elevated to a certain extent by this movement.

According to DeLee, twenty thousand women and seventy-five thousand children, die annually in the United States, from the lack of proper care at childbirth. One mother

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out of every one hundred and fifty-four, sacrifices her life in childbirth. We have no way of estimating the number of mothers left invalids from infections and lacerations due to childbirth, or the number of children who survive birth injuries, but live to become a burden to the family or the state as epileptics, mental defectives, etc.

How can this state of affairs be remedied? The answer is—first, by regulating the midwives; second, by educating the public, and third, by having better trained physicians who are willing to devote their time to obstetrics. When it is considered that forty per cent of the babies in the United States are delivered by midwives, it becomes evident that their control and supervision is about half of our battle. There is no doubt that the midwife is our problem, and that she is here to stay.

In Europe, midwives are a valuable asset to the profession; but in this country, where they have not been properly restricted, they are a disgrace. The solution is to educate and regulate them. In France and Germany, they have been under strict supervision for a great number of years. In England, in 1907, Parliament passed a law requiring midwives to first have regular nurses' training, with the usual practical experience in the delivery room; to then have four months' lectures and manikin training, after which they must deliver forty babies in the presence of an expert, where their technique can be criticized and improved. They are then given the degree of C. M. B. About 75 per cent of the trained nurses in England, today, have taken this course. How many medical students in this country have delivered forty babies and seen a hundred delivered?

In New York, a midwife's license can be revoked for the infraction of any rule. In New Jersey, her license must be renewed yearly; and if a midwife's record is not what the board considers it should be, her license is revoked. In New York City, the midwife's school has graduated four hundred and ten women in twelve years. The admission requirements have been increased until applicants are now of a fairly intelligent class. New York is the only city in the United States that has shown a marked lowering of the maternal death rate in the last few years. In Philadelphia, every mother and baby delivered by a midwife, must be inspected by a medical officer within 48 hours. These inspectors are also consultants to midwives in abnormal conditions, where patients are not able to pay the fee of a private physician, and they are required to give lectures to midwives.

In Texas, there is a law requiring midwives to take an examination, but there is no penalty attached for its violation. This means that we have no law, and the midwives know this.

I could cite instance after instance of criminal neglect on the part of midwives in San Antonio. One case of placenta praevia came into the city hospital, where a midwife had been in attendance for seven days. The patient had been bleeding continuously and was almost exsanguinated. Upon asking the midwife why she waited so long to bring the patient into the hospital, she replied, "No bebe, no dinero." Another case of a negro woman was admitted, where an arm had been presenting for 48 hours and the shoulder had become impacted (the arm and hand being so swollen from pressure that it looked more like a thigh), requiring a difficult amputation in order to deliver. There was also a case of postpartum hemorrhage, where the cord had been severed from the placenta for 24 hours, and the placenta was found to be partly adherent. These and many other deplorable cases of puerperal sepsis which ignorant midwives have improperly cared for, have been brought to the city hospital.

Texas is one of the eight states that do not supervise and regulate midwives. The Child's Welfare Bureau accounted for three hundred midwives, who were practicing in this State. This problem is certainly important enough to arouse state concern, and the responsibility for its solution rests upon the medical profession. Much has been done by the Child's Welfare Bureau in distributing pamphlets in regard to prenatal care. When the educational work under the Sheppard-Towner law is begun, the public will become enlightened as to the dangers of childbirth and will demand better obstetrics. There will be special attention given to rural districts where doctors are becoming scarce and where supervision of midwives will be very difficult. Prenatal and postnatal clinics will be a necessity, so that all classes may be cared for.

It is generally conceded that even our best medical colleges have not given the students the proper clinical or practical training in obstetrics and, unfortunately, the younger physicians do a good part of our obstetrical work. By the time they have developed a keen judgment in difficult obstetrical cases from practical experience, their practice in surgery or some other branch of medicine has also reached a point where they find it easy to give up their laborious obstetrical practice. The conscientious man or woman who gives the obstetrical patient the proper prenatal and postnatal care, staying with the patient continuously during the second stage

of labor and noting the fetal heart action every ten or fifteen minutes, has truly performed a laborious task, and remuneration should be in accordance with the judgment and ability displayed.

The better trained physicians have done much in the care of the new born, in abstaining from the violent methods of resuscitation by routine spinal punctures after strenuous labors, precipitate labors, or forceps deliveries, and if blood is present in spinal fluid by administration of blood to increase the coagulation time. The time for specialists of ability in this branch of medicine is surely coming, and as the public becomes educated to the dangers of childbirth, a demand for expert care will be instigated.

Whether they assume it or not, the medical profession has a sociological responsibility to the public in regard to laws governing medical problems. If we do not work together in influencing our lawmakers, so that laws may be wisely devised and kept under proper auspices, we, individually, will be the ones to suffer. We owe it to the public to teach women the importance of prenatal and postnatal care and of proper care during delivery, particularly in training primiparae that they should be delivered in a hospital.

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REPORT OF CASES OF FOREIGN BODIES IN LUNG AND ESOPHAGUS, WITH SPECIAL REFERENCE TO POINTS OF DIAGNOSIS.*

BY

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These cases are reported not with the idea of dwelling on their number, but because they are rather typical of the foreign body cases to be met with in this country, and have some points of distinct value from the standpoint of diagnosis:

CASE REPORTS.

Case No. 1.—R. L. T., aged 14 months, was seen January 14, 1922. She was holding a grain of corn in her mouth when an older brother rolled a ball to her. She grabbed at the ball, and had a severe choking spell, the grain of corn disappearing. After a little, the breathing cleared but the mother was quite positive that she had not gotten rid of the grain of corn. (This was about 3 hours before I saw the patient.) Both *x*-ray and stethoscopic examination of the chest were negative, but relying on the history, the bronchoscope was passed. The grain of corn was found in the right bronchus, and removed. The larynx showed some reaction, which cleared up in a few days, without further help.

Case No. 2.—Miss E. C., aged 20, was seen July 31, 1922. She stated that on the previous day she had gotten a grass-burr in her finger, and was attempting to pull it out with her teeth, when she took a sudden inspiration and found that she could not talk, and that she had pain in the region of the larynx. Examination with a laryngeal mirror showed the grass-burr directly between the vocal cords, holding them apart. No *x*-ray or other examination was made, as the diagnosis was looking right at me from the laryngeal mirror. The patient was given a dose of morphine, and cocaine was applied carefully to the larynx. The laryngoscope was introduced and the grass-burr removed. Recovery was uneventful, except for a slight hoarseness for several days.

Case No. 3.—E. McK., aged 15 months, was seen August 2, 1922, at 2 a. m. Eighteen hours before I saw her, she had a piece of peach seed in her mouth, when some one made her laugh, which was followed by a severe choking spell. The respiration continued bad from that time. She had all the appearance of a child about dead with laryngeal diphtheria. Her condition was such that I did not feel that I could wait for any preparation, *x*-ray and the like. I at once exposed the larynx, thinking that the foreign body might be lodged there, but found the larynx

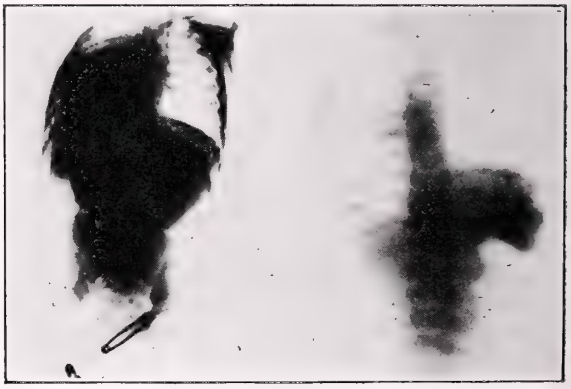

FIG. 1. Radiogram of chest in Case No. 4, when admitted to hospital.

FIG. 2. Radiogram of same case as in Fig. 1, ten days after foreign body was removed, showing lung practically clear.

clear. I immediately introduced the bronchoscope, and found nothing in the trachea, but both bronchi were filled with secretion. This was removed several times, but the bronchi kept filling up, and finally the patient stopped breathing. I removed the bronchoscope and did an immediate tracheotomy and reestablished breathing, with hope of the patient recovering enough to again introduce the bronchoscope, but she did not do so, dying about 24 hours later.

Case No. 4.—E. L. B., 19 months of age, was seen July 11, 1923. Three weeks previously she had been given a chicken drumstick to suck on. She soon had a bad choking spell, and it was found that the soft, spongy end of the bone had been bitten off. The mother recovered some pieces of spongy bone and cartilage, but since that time the patient had had considerable disturbance of the chest and had not been doing well generally. On admission to the hospital, the left chest showed entire loss of motion, no air going into the left lung. The *x*-ray showed the

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entire left lung solid and the heart pushed over to the median line. After being prepared with morphine and atrophine, the bronchoscope was passed and a small piece of crumbly bone removed from the left bronchus. Two days later, considerable laryngeal reaction had taken place and it was found necessary to do a tracheotomy, after which recovery was uneventful. Two weeks afterward, all evidence of trouble in the lung had disappeared, as shown by the *x*-ray and stethoscope.

Case No. 5.—O. H. B., aged 19 months, was seen July 28, 1923. One day previously, while eating watermelon, the child had a severe choking spell, and Dr. O. N. Mayo of Brownwood, thought he could detect by the use of the *x*-ray some evidence of the watermelon seed in the left lung. We considered the *x*-ray plate negative, but the child had a great many rales over both lungs, and it was thought best to pass the bronchoscope. The watermelon seed was found in the left bronchus, and removed. The patient had a great deal of laryngeal reaction, and it became necessary to do a tracheotomy in a few hours. Three days later the patient had considerable lung involvement but seemed to be doing better. Five days after the operation, the lungs had cleared up, but the patient was unable to swallow and food ran into the trachea, so that he had to be fed with a stomach tube.

On August 7, his general condition was much better and the lungs seemed to have cleared up. August 10, the patient continued to improve, gaining strength and better control over swallowing, but still had to be fed with a tube. The tracheotomy tube was removed. August 12, the lungs were clear but the patient had fever and was quite restless. He had a bad night and was very restless, with high fever, cold etremities, and considerable cyanosis. The patient died at 5 p. m., sixteen days after the operation.

Case No. 6.—Mrs. G. A., aged 17 years, was admitted to the hospital October 20, 1922. While eating watermelon one day previously, she had a severe choking spell but had had no cough since that time. The *x*-ray and physical examination of the chest were negative but the patient was so positive that she had a watermelon seed in her chest that after being given morphine and atrophine, and cocaine had been applied to the larynx, the bronchoscope was passed and a thorough inspection of the lungs made. Nothing was found, and the patient was put back to bed. The subsequent history was uneventful, except for soreness in the chest for a few days.

Case No. 7.—R. M., aged 15 months, was seen November 9, 1923. Thirty-six hours previously, while eating pecans, the child had a severe choking spell, and had had one or two since. He was breathing very well. Both the *x*-ray and stethoscopic examinations were negative as far as locating any foreign bodies, but considerable rales were heard over both lungs. With a history of several choking spells, it was thought best to pass the bronchoscope, which was done. After a thorough search, nothing was found. There was considerable reaction in the lungs for a day or two, but this cleared up.

Case No. 8.—C. H. R., aged 3 years, was seen January 16, 1922. About 10 hours prior to admission to the hospital, the patient had swallowed a penny that failed to go down, and had not been able to swallow anything else, not even water. The *x*-ray later showed the penny at the sternal notch, lying crosswise of the body. This position of the penny was quite suggestive of a coin in the esophagus, which, together with no disturbance of respiration, and inability to swallow, made the diagnosis absolute. Without any preparation, the esophagoscope was passed and the penny removed. Complete recovery followed, without any complications.

Case No. 9.—E. H., aged 18 years, was seen August 18, 1923. Thirty-six hours previously, the patient had had nose-bleed, and was told that if he held a piece of silver in his mouth it would stop the nose-bleed. He tried it with a silver dime and before he knew it the dime had disappeared and he began having choking spells, which would subside as long as he was in the erect position, but return on assuming a horizontal position. He could sleep only in the upright position. A radiogram, taken in the anterior-posterior plane, did not show satisfactorily, but a plate taken in the ¾ position, bringing the coin from in front of the vertebral column, showed it to be about the bifurcation of the trachea. Ordinarily, we would expect a coin in the trachea to lie in the anterior-posterior plane, but in this instance I sized the situation up about as follows: The dime, being smaller than the trachea but larger than the bronchi, did not go further than the trachea, but was moveable there, so that when the patient assumed a horizontal position the coin would roll down to the larynx and cause the choking spells. When he

FIG. 3. Radiogram of chest in Case No. 9, taken in antero-posterior position. The thin dime shows very dimly.

FIG 4. Radiogram of chest in Case No. 9, taken in the three-fourths position. The dime is away from the vertebral column and shows very clearly.

would raise up it would roll down the trachea again. The patient was given morphine and cocaine was applied to the larynx. The patient's head was placed a little lower than his body, when the coin was presented at the larynx and was removed. Recovery was immediate and without complication.

The next two cases were not operated upon, the patients preferring to take the expectant route. They are reported for their diagnostic values.

Case No. 10.—Baby B., aged 2½ years, was admitted to the hospital June 29, 1923. While eating popcorn a day or so before, he had a choking spell, which passed off but left a peculiar wheeze at the end of expiration, heard only at the patient's mouth. *X*-ray and stethoscopic examinations were negative, but the wheeze was characteristic. I advised passing the bronchoscope, but the patient's father declined. This wheeze is spoken of as an asthmatoid wheeze, and was first described by McCrae of Philadelphia, as being very definite evidence of a foreign body in the lungs. It is explained as follows: The foreign body is lodged in a bronchus, and during inspiration the bronchus dilates and air can pass freely by it. In the course of expiration, the bronchus has contracted to its minimum size and causes a wheeze as the air passes the foreign body, but the wheeze is heard only at the mouth of the patient. About two

weeks after I saw the child, he had a severe coughing spell and his father caught him by the heels and beat him in the back, after which the wheeze disappeared. He got by with it, but it was a dangerous proceeding, as the foreign body might have lodged in the larynx, with almost instant death.

Case No. 11.—Baby T., aged 19 months, was seen August 4, 1923. The previous day the baby was seen to have a piece of broom-straw in his mouth. He had a severe choking spell, and since then had coughed quite a good deal. The stethoscope revealed quite a disturbance of the right lung, in the region of the right bronchus, and the *x*-ray showed a very considerable disturbance at the same point. With the history, and both the *x*-ray and the stethoscope confirming the diagnosis, bronchoscopy was strongly advised, but the family had had so much trouble both physically and financially that they declined to have anything done. Since then, the mother has given me the following history: The child was quite sick for 28 days, after which it had a severe coughing spell and coughed up a piece of broom-straw. For three weeks he got along very well, and then had pneumonia in the left lung. She thought he had recovered from that, but he hasn't done any good since. For awhile it looked as though he would get by with the expectant plan, but at the last report the outlook was not encouraging.

I wish to call attention to the absolute necessity of *x*-ray and physical examination in these cases, and to urge that they not be undertaken with undue haste. Formerly it was thought that only dense, opaque bodies could be located by the *x*-ray but in this small series there were two cases, the child with

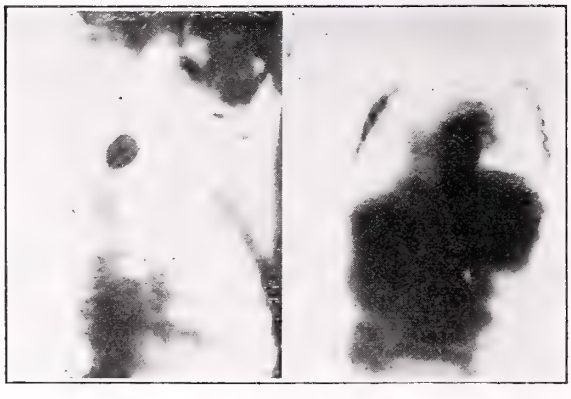

FIG. 5. Radiogram in Case No. 8, showing the penny transverse to the position of the body, indicating that the foreign body is in the esophagus.

FIG. 6. Radiogram in Case No. 11, showing marked disturbance of lung in region of right bronchus.

the soft chicken bone and the one with the broom-straw, in which were very clearly shown, not the foreign bodies but the disturbances of the lungs caused by them.

The first case of this series was devoid of symptoms, as far as the *x*-ray and chest examinations would show, the diagnosis being made from the history of the case. The two coin cases presented very definite symptoms of their location, so there was no delay in looking in wrong locations. Of the eleven cases reported, two chose to take the expectant route. One got by in good shape, but took a big chance; the other is not "out of the woods" yet, although he has seemingly expelled the foreign body, or part of it.

In two cases nothing was found, but the patients were none the worse for the search. In two of the cases the patients died, one being admitted to the hospital in a dying condition, and one dying sixteen days later. In this latter case there was a badly inflamed lung at the time the watermelon seed was removed, and judging from the way the seed was imbedded in the lung, only the point showing, he would have been unable to expel it, and, without removal, was probably doomed. In the other five cases, in which the foreign bodies were removed, very satisfactory recoveries ensued and there seemed to be very poor prospects without operation.

ABSTRACT OF DISCUSSION.

Dr. E. M. Sykes, San Antonio: That a foreign body may eventually be coughed out or swallowed, is no excuse for allowing these cases to run along without intervention. Statistics show that the removal of the foreign body by a skilled operator gives the patient a much greater chance to recover.

I quite agree with Dr. McReynolds' method of avoiding general anesthesia. The operator without intelligent assistants, is certainly handicapped, to say the least, and is very liable to fail. The extraction of foreign bodies requires teamwork, and no one should attempt it unless he has the co-operation of those who know what to do and when to do it.

Stethoscopic and *x*-ray examinations should be made in all cases. Even when the foreign body is not shown up in the film, certain changes in the lung, which may be blocked off by a foreign body, will often show up in the radiogram.

Dr. C. P. Schenck, Fort Worth: Because of the harm which may be done even by the most careful operator, ill-advised endoscopies are contraindicated. When the patient presents himself with a history of having swallowed or inhaled a foreign body, the most careful consideration must be given to the problem of whether or not a search should be made. Along with the history the subjective symptoms and evidence to be obtained by the stethoscope and *x*-ray, must be given due weight. Unless the surgeon reaches a fairly definite conclusion that the foreign body is still in the throat or air passages, it is, in my judgment, the best policy to pursue an expectant course with the element of time helping to establish a diagnosis, because even the most delicate instrumentation may produce marked inflammatory reaction.

This statement is borne out by the fact that three tracheotomies were done to relieve laryngeal stenosis by the six bronchoscopies reported in the paper. This is not said by way of criticism of Dr. McReynolds' efforts, for we all know of his skill in this particular field. When laryngeal stenosis occurs, I much prefer to resort to intubation instead of tracheotomy, as the latter opens an avenue for septic infection, which may or may not have played a part in the second of the two deaths reported. Extreme watchfulness is necessary to properly safeguard cases which have laryngeal obstruction bronchoscoped. Where intubation proves inadequate, I would hasten to perform a tracheotomy.

Dr. J. H. Foster, Houston: I am very glad Dr. McReynolds has presented this paper. I feel that some of us have been derelict in bringing this subject to the attention of the general practitioners of the state. Of the Texas specialists who began this work some time ago, the late Dr. Burgess of Waco, probably did more than any other to bring it to the attention of the profession. I am willing to acknowledge my own dereliction. At first, I felt a bit presumptious to present these cases with my slight experience in bronchoscopy, but it should be done. There are a great many cases with foreign bodies in the lungs that are not investigated. Some are in tuberculosis hospitals. I have been doing this work for 13 years and I find that I have had slightly less than 100 cases. I am sure that many cases have escaped notice that would have come in had attention been drawn to them.

Recently, I saw a man who had carried a piece of oyster shell in his lungs for 18 months, and who had a lung abscess which had not received attention. I am sure bringing these cases to the attention of the profession will do good. The number of cases of bone in the lung and oesophagus which escape diagnosis by the *x*-ray is surprising. I have removed some very large pieces of bone which did not show in the radiogram, one was a piece of soup bone and another, a large piece of chicken breast-bone.

Dr. R. H. T. Mann, Texarkana: I was one of the first in this section of the country to do this work. I have had a good many cases, and am still learning. Every one of these patients should be examined with the *x*-ray, but we should not rely upon negative reports, especially in seed cases. In using the bronchoscope, some method of suspension laryngoscopy should be used with it, as there are a great many advantages in this technique. One of the later modifications of Killian's suspension laryngoscope affords a perfectly clear view of the larynx, so that a bronchoscope can be introduced with no trouble, and cause no trauma. Postoperative tracheotomies are largely due to trauma in introducing the bronchoscope, or to excessive manipulation in the larynx. By the suspension method, all of this trauma can be avoided, because a clear and distinct view of the larynx can be obtained, and no undue manipulation is necessary. If the foreign body is larger than the lumen of the bronchoscope, and is not removed at the first effort, then the bronchoscope can be reintroduced without any difficulty, and a second effort made. I have had no experience with the Directoscop, which was presented here this morning, but the Lynch modification of Killian's suspension laryngoscope is a tongue depressor and mouth gag combined, so that the tongue or teeth should not be damaged more than with the ordinary mouth gag. When there is a good view of the larynx, a large percentage of these cases can be handled successfully. One can look down into the trachea and bronchi without any difficulty whatever. We would not think of sending a man away to some distant place to have a foreign body removed from the tonsils, because we can see it and remove it easily. By the method of suspension laryngoscopy, we can see just as well into the larynx, trachea and bronchi, and locate and remove at least ninety per cent of the foreign bodies. Of course, there are cases where foreign bodies are so deep in the bronchi that an attempt to remove them will be unsuccessful, and these cases will have to be referred to some one possessing greater skill. It is rarely necessary to do a tracheotomy.

Dr. Sidney Israel, Houston: My views as to whether or not a bronchoscopy should be done in the presence of an unexplainable cough, are the same as would be held by the general practitioner towards performing a cystoscopic or blood examination. The time has arrived for the general attitude toward bronchoscopy to undergo revision. It is by no means a last resort method of examination, nor is it a hazardous or a tremendous ordeal, when performed by one sufficiently skilled.

In young children, no anesthetic is necessary, and in adults, a local anesthetic is sufficient. When working with children without an anesthetic, and in the presence of normal sensitiveness, there is less danger of producing trauma than there would be if the child was under a general anesthetic and unable to give any sign of discomfort from the manipulations. Shock is also eliminated when working without anesthesia.

In view of these facts, one should develop his technique so that he can perform this type of examination rapidly, or without delay.

Bone may or may not show in the *x*-ray examination, depending entirely upon the amount of cortex or of cancellous bone.

In case of a body in the upper third of the trachea or in the larynx, the Directoscop is all that is required, and it offers a very valuable means of direct examination.

Dr. W. R. Thompson, Fort Worth: One feature of this class of work that I particularly admire, is that the general practitioner does not undertake it.

Dr. J. M. Britton, El Paso: Last year a patient was sent to El Paso for tuberculosis, whose health had been going down for several years. The *x*-ray showed a collar button in the left bronchus. He went to Chavalier Jackson and the foreign body was removed. This patient is now well.

Dr. McReynolds (closing): The things I wish to stress at this time are the diagnostic points. I cannot tell these specialists here about diagnostic points, but I can tell general practitioners something about them. I want to state my experience with regard to the expectant treatment. Four cases were reported in one day, in which the expectant plan had been followed—three of the patients died. In the other case, the diagnosis was not made until the patient coughed up a bean. With a mortality of 75 per cent where the expeetant method is used, I feel that evidence is in favor of doing a bronchoscopy even though the foreign body is not found. A few days ago, I had a case in which I failed to find the foreign body, but I did not hurt the patient any and did no harm. I want to impress on the profession generally the necessity of watching these diagnostic points. The instrument Dr. Israel has shown us this morning will possibly be helpful in finding foreign bodies in the larynx.

Salvarols and Insulols.—Salvarols are stated by the Drug Products Company to be rectal suppositories containing arsphenamin. The lack of evidence for the value of the rectal administration of arsphenamin was the subject of a report of the Council on Pharmacy and Chemistry in 1920, and the Council's conclusions have been fully confirmed. Insulols are stated by the Drug Products Company to be suppositories made "with carefully selected desiccated pancreas including the islands of Langerhans containing insulin in a safe and reliable form." The rectal administration of insulin has been tried, but without success. No preparation of the Drug Products Company has been admitted to New and Nonofficial Remedies. On the other hand, the Council on Pharmacy and Chemistry has reported unfavorably on the firm's "Pulvoids Calcylates," "Pulvoids Calcylates Compound" and "Pulvoids Natrium Compound."—*Jour. A. M. A.*, July 26, 1924.

THE THERAPEUTIC USE OF BLOOD IN INFANCY AND EARLY CHILDHOOD, WITH AN EASY METHOD OF TRANSFUSION.*

BY
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This most valuable therapeutic measure and live-saving procedure is still unappreciated and used far too infrequently. Scarcely a week passes that the physician with a large practice among children does not find the need of this agency in his private or hospital work.

The simplest method, and one requiring no special equipment and which is within the reach of every doctor, is the intramuscular injection of whole blood. No hospital equipment is required and no laboratory assistance is needed. It can be done in the home or office as safely and as easily as in the hospital. No typing of the donor's and recipient's blood, and no citrating need to be done. The only precautions necessary are asepsis in the technique and being sure that the donor has never had syphilis. The blood of the father or mother is nearly always employed, and consequently a Wassermann is not necessary. Two intravenous needles, size 18, and a 30 c.c. glass syringe, is all the equipment needed. The administration of from 10 to 30 c.c., frequently repeated, is much better than larger amounts at longer intervals. After filling the syringe with the donor's blood, quickly apply a new needle and inject about one inch deep into the gluteus or triceps muscle. In this connection, it must be remembered that it requires some force to inject uncitrated blood into the muscle.

The indications for the use of this method are as follows: Hemorrhagic diseases of the newly-born, malnutrition, hematuria and secondary anemias. It is the method of choice in hemorrhages of the newly-born, whether the hemorrhage is internal or external. Evidence of bleeding, no matter how small the amount, should not be ignored. During the first few days of life, a slow pulse, bulging fontonalle, irregular respiration, paralysis, strabismus, and especially convulsions, stupor or irregular respiration, justifies an immediate diagnosis of cerebral hemorrhage. The patient should be given the benefit of the doubt, and the above procedure instituted, giving from 10 to 20 c.c. of blood every 8 to 12 hours until the symptoms improve.

The time is close at hand when a blood-clotting test will be done routinely on every infant after the second day of life, and if it is found that the clotting time is delayed, a prophylactic injection of blood from either parent will be given without waiting for hemorrhage to occur. I frequently see cases of malnutrition that will not respond to drugs or any method of feeding, but that will begin to thrive immediately following one or two injections of whole blood. Of course, such cases are complicated by an associated secondary anemia. In uncomplicated secondary anemia, this method works like magic. I have seen the red blood cells increase a million within two or three days following one injection.

Many conditions cannot be overcome by the above recited method, under which circumstances the intravenous route must be chosen. This is a most difficult procedure in early life, and the most expert frequently fail. The external jugular vein, the femoral vein and the longitudinal sinus, are the only veins accessible at this early age. The longitudinal sinus is decidedly the easiest route, but should not be selected by anyone who is not experienced in the work and not familiar with every detail. As this method cannot be recommended to the physician in general practice, it will be passed without further discussion.

Recently, a simple method of transfusion has been devised by Silverstein, which is within the reach of every doctor. Silverstein definitely proves that it is a true transfusion, yet the blood is not injected into the vein. This method is the intraperitoneal injection of citrated blood. The technique is the same, and it is just as simple as the intraperitoneal injection of normal salt solution. The equipment is the same as for the intramuscular injection. This method can be used in the home as well as in the hospital. Laboratory assistance is necessary, for the blood of the donor and of the recipient must be matched, which is the only art of the whole procedure that is not extremely simple. The typing should be done only by an expert. I have violated this rule several times in emergencies, without any reactions, but except in emergency it should never be done. The amount of blood used varies from 100 to 400 c.c., according to the size and condition of the child. For each 100 c.c. of blood, 10 c.c. of a 2 per cent sodium citrate solution is gradually added as the blood is drawn. This blood must be used immediately, for it will not do to allow it to stand any length of time, as is frequently done when it is given intravenously.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

Whole blood or old citrated blood will not be absorbed when injected into the peritoneal cavity. With aseptic technique, and if the blood has been typed, no one need hesitate to use this method of transfusion. The procedure is very simple: The syringe is filled with the freshly citrated blood and a short-beveled, 18-gauged needle is attached. The skin is pinched up in the median line, about one inch below the umbilicus, and with the needle pointing upward, it is thrust through the abdominal wall. In this way, there is no danger of wounding an intestine. The contents are discharged into the abdominal cavity, leaving the needle in place and detaching and refilling the syringe the injection is continued until the required amount is used. Within fifteen minutes this blood begins to appear in the circulation unchanged, and within two to three hours the entire amount is taken up from the abdominal cavity. Silverstein has definitely proven these facts by animal experimentation.

The indications for the use of this method are: In severe secondary anemia where the red blood count is below 2,500,000; in severe hemorrhages, shock, hemophilia, purpura hemorrhagica, pseudo-leukemia or respiratory infections with an associated secondary anemia; in erysipelas, an exsanguination-transfusion or toxic shock of superficial burns with convulsions, and in premature infants. The increase of the red blood cells seems to be as prompt and as great as in the intravenous transfusion. On several occasions I have seen an increase of from one to two million in forty-eight hours.

ABSTRACT OF DISCUSSION.

Dr. F. O. Calaway, Houston: This treatment has been more or less neglected because the technique is a bugbear to most doctors. The administration of whole blood is the method of choice, especially in cases of hemorrhagic tendency. I do not approve of the citrate method mentioned, in these particular cases. The use of whole blood is better. Of course, direct transfusion in the longitudinal sinus is more beneficial. No one need hesitate to use the parents' blood if speed is imperative. In the newly-born there is no alteration in the blood-clotting time in the first two days, as pointed out by Sharp of New York. In the absence of facilities for typing blood, the so-called therapeutic test may be used. This consists in injecting a small amount of the donor's blood under the skin of the infant, and observing any reaction. The citrate method, used intraperitoneally, is a valuable aid in treating these children.

Prophylactic Inoculation of Dogs Against Rabies.—The evidence for the efficiency of prophylactic immunization in persons bitten by rabid animals has long been too convincing to permit of doubt. In Japan experiments to reduce the frequency of rabies by inoculation of the dog population show that its frequency with dogs has been greatly reduced.—*Jour. A. M. A.*, July 5, 1924.

BONE LESIONS OF SMALLPOX.*

BY

W. L. BROWN, M. D.,
C. P. BROWN, M. D.,
EL PASO, TEXAS.

Clinical bone complications during or as sequelae to smallpox are comparatively rare, as indicated by a reasonable search of the literature, as well as personal inquiries from isolation hospitals. At El Paso, where 390 cases have been treated in the last eight years, there is no history or record of osteomyelitis as a complication or sequel. Councilman[1] states that he has never seen a case of osteomyelitis as a complication of smallpox. Ingelrans and Taconnet,[2] in 500 cases of smallpox, noted osseous lesions consecutive to the infection in three cases. The evidence

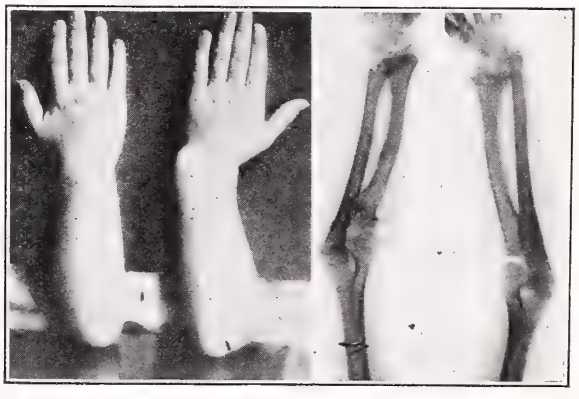

FIG. 1. American, female, aged 6 years. Smallpox at 3. Picture shows short, stubby forearms and marked deformity at the wrist caused by lack of growth at the lower end of the radius, the ulna growing out past the wrist-joint.

FIG. 2. *X*-ray of both arms shown in Fig. 1. Picture shows reason for deformity of the left wrist. Lower epiphyseal line of the left radius destroyed. Lower epiphyseal lines of both radius and ulna destroyed in the right arm, allowing only partial growth in length of forearms.

seems conclusive that there are two distinct forms of osteomyelitis occurring as complications of smallpox. The ordinary metastatic pyogenic osteomyelitis is the more frequent variety, as indicated by Neve,[3] Bidder,[4] Mauclaire,[5] Paré,[6] Debeyre,[7] Schwenk,[8] Kolaczek,[9] and others. That it does not occur

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 30, 1924.

1. Councilman, W. T.: "Smallpox," Osler's Modern Medicine, Chap. 50, p. 790.
2. Ingelrans and Taconnet: "Osteoperiostities Post-varioliques, Echo Med. du Nord, Lille, Vol. vii, p. 176, 1903.
3. Neve, Arthur: "Cases of Bone Disease After Smallpox in Young Children," The Lancet, 1887, Vol. xi, p. 609.
4. Bidder, A.: "Zur Kenntniss Der Eitrigen Gelenkentzundungen Bei Variola," Deutche Ztschrft. f. Chir., 1873, Vol. xi, p. 453.
5. Mauclaire: Maladies Des Os., p. 94.
6. Pare: Oeuvres Completes, Vol. cxi, p. 258.
7. Debeyre, A.: "Osteomyelitis Postvarioliques," Echo. Med. du Nord, Lille, Vol. vii, p. 182.
8. Schwenk: "Symmetrical Osteomyelitis Post Variolem. (Symmetrische Osteomyelitis nach Variola)," Arch. F. Kinder, Vol. lviii, pp. 12-29, Stuttg., 1912.
9. Kolaczek: (Cf. Deut. M. W., 1878) published a book on symmetrical osteomyelitis variolosa observed in 1874 at the Breslau Surgical Clinic, first and only case reported in literature up to 1912.

more frequently as a complication of smallpox, a disease so universally accompanied by pus, is somewhat surprising. Our object in presenting this paper is to call attention to what appears to be an entirely different pathologic process complicating smallpox,

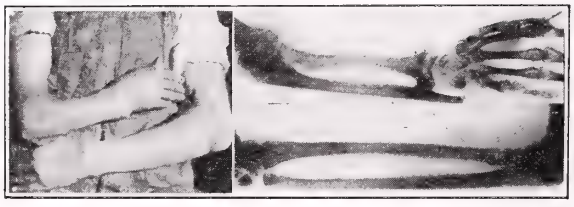

FIG. 3. Mexican, male, aged 20 years. Had smallpox earlier than he can remember. Face badly pocked. Picture shows characteristic deformity of the right forearm. It is short, stubby and deformed; much shorter than the left. (Referred by Dr. Irving McNeil.)

FIG. 4. *X*-ray of arms shown in Fig. 3. Picture shows great shortening of the right forearm. Lower epiphyseal line of the right radius has been destroyed, and there is a bony bridge across to the ulna. The ulna has grown completely past the wrist-joint. The short, stubby and deformed forearm is very characteristic.

and one which the present evidence would indicate is due to the specific virus of variola.

Chiari,[10] Mallory[11] and MacCallum[12] report microscopic lesions consisting of small nodules in the substance of the testes, which are entirely characteristic of smallpox. Chiari and Mallory both report identical necrotic areas in the bone marrow at necropsy in patients dying in the active stages of smallpox. Chiari made laboratory studies on the bones in twenty-two necropsies on the bodies of patients who had died during the three different stages of smallpox, and Mallory's conclusions were based on laboratory study of the bones of three patients dying during the suppurative stage. Chiari concludes, after his laboratory studies of the twenty-two post-mortem cases referred to, that the microscopic findings in the bone marrow of variola cases show that these disseminated foci constitute a pathologic process caused by the variola and bearing a variolar character itself; that this osteomyelitis variolosa is to be found in all stages of the disease, and that the foci in the bone marrow never show suppuration. It is also his opinion that these disseminated foci may explain the frequent bone pains of which variola patients complain.

He had the opportunity of studying the pathologic process in one case, two months after variola. His study of that case gives very good presumptive evidence as to the pathologic process that occurs in the clinically manifested osteomyelitis due strictly to the virus of variola. He found the marrow of the femur lymphatic and hyperemic, and that in the isolated, nodular, pale foci, contraction of the necrotic tissue had set in. The obliterated structure of the bonemarrow was replaced by fine and coarse granular detritus, representing a resorption process in the necrotic foci resembling the healing stage of orchitis variolosa.

Mallory states that in variola the marrow from various bones shows more or less numerous, circumscribed, typical inflammatory foci associated with central necrosis, and that osteomyelitis variolosa is extended throughout the osseous system.

In 1903, Debeyre observed that cases of osteomyelitis complicating smallpox more commonly ended without suppuration. In 1910, Musgrave and Sison[13] reported, with photographs, six cases of great deformities of the joints of the arm and legs following smallpox, showing to what great extent destruction and deformity might occur without suppuration. In 1913, they[14] reported twelve more cases, submitting roentgenograms to show the extensive destruction in the epiphy-

FIG. 5. Mexican, female, aged 39 years. Moderately pocked. She does not remember having had smallpox. Picture shows complete destruction of lower epiphyseal lines of both forearms; almost complete destruction of the upper end of the left radius; forearm short and stubby. (Referred by Dr. Frank T. Hoagland.)

FIG. 6. Italian, male, adult. Picture shows complete destruction of upper epiphyseal line of the radius. Ankylosis at the elbow-joint and deformity at the wrist, because of unequal growth in the length of the radius and ulna. (Courtesy of Dr. D. B. Phemister.)

10. Chiari, H.: "Osteomyelitis Variolosa (Ueber Osteomyelitis Variolosa), Zeigler's Beitr. z. Path., Anat. and Allgem. Path. 13, No. 1, pp. 13-31, Jena., 1895.
11. Mallory, F. B.: "Ueber die Verbreitung der Osteomyelitis Variolosa in Knochensysteme," Ztschr. f. Heilk, Vol. xv, pp. 235-254, Berlin, 1894.
12. McCallum. Text Book Pathology, Second Edition, p. 763.
13. Musgrave and Sison: "The Bone Lesions of Smallpox," The Philippine Journal of Science, April, 1913.
14. Musgrave and Sison: "The Bone Lesions of Smallpox," The Philippine Journal of Science, April, 1913.

seal ends of the long bones, often involving the joints, these patients having shown no evidence of suppuration.

FIG. 7. Picture shows deformity of both elbow-joints, with marked shortening of bones of the forearms and to some extent of arms, and with partial ankylosis of both elbow and wrist-joints. Deformity also of both knee-joints, and some shortening of the bones of both legs. (Musgrave and Sison, *The Philippine Journal of Science*, April, 1913.)

In 1912, Cange[15] reported three cases of symmetrical deformities of the forearms and hands due to smallpox. In 1922, Sheldon[16] reported two cases of great deformity, one of the elbow and forearm and the other of the tibia and fibula, involving the ankle joint.

Musgrave's and Sison's eighteen cases were Filipinos. Sheldon's two cases were Chinese. One of our cases was an American and two were Mexicans. Dr. Phemister's case was an Italian, and has not yet been reported. He has extended us the courtesy of producing the pictures of this case in our article.

CONCLUSIONS.

1. From the foregoing it would appear that there are two distinct forms of osteomyelitis complicating or as a sequel to smallpox, the ordinary pyogenic metastatic osteomyelitis that occurs in other infectious diseases, and a distinct form of necrosing, non-suppurating osteomyelitis probably due to the specific virus of smallpox, which frequently involves the diaphyseal ends of the long bones, destroying the epiphyseal lines and causing late deformities.

2. The specific form of variolar osteomyelitis most frequently occurs in children.

3. It is not recognized during the acute clinical stage as osteomyelitis, and the deformities are often overlooked, because their evolution is gradual and the patient has left the care of the physician before deformity occurs.

ABSTRACT OF DISCUSSION.

Dr. John T. Moore, Houston: This is a new question to me; I have had no practical experience in this class of patients. In my observation of fifty or sixty cases of smallpox in a detention camp, I did not see or hear of any bone lesions. Such lesions must be rare to those living away from smallpox centers. Dr. Brown deserves our congratulations on this excellent contribution.

15. Cange, A.: "Un Syndrome Osteomyelitique Post-variolique," Province Med., Par. 23, pp. 573-577, 1912.

16. Sheldon, F. B.: "The Bone Lesions of Smallpox with Report of Cases," read before the American Roentgen Ray Society, 1922.

ABDOMINAL PREGNANCY AT OR NEAR TERM, WITH REPORT OF A CASE.*

BY
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While admitting the theoretical possibility of primary abdominal pregnancy, I exclude its consideration from this article, because of its rarity, and the inconclusive data supporting its actual occurrence. P. Jacquin reported a case of primary abdominal pregnancy, and reviewing the entire literature of all reported cases of primary abdominal pregnancy, considered authentic only those cases reported by Richter, Czyzwicz, Kohler and Walker.

Secondary abdominal pregnancy, however, may occur whenever an embryo extruded into the peritoneal cavity, retains sufficient placental attachment to carry on its circulation. The general fate of small embryos, intra-abdominally situated, is absorption. A secondary abdominal pregnancy may also terminate by suppuration, mummification, or by lithopedion, or adipocere formation. If a secondary abdominal pregnancy progresses uninterruptedly, it is subject to all the conditions which might affect an ordinary intra-uterine foetus. Hematomas, hydatid moles and even eclampsia, have been reported in abdominal pregnancies.

Etiologically, an arrest of a fertilized ovum at some point between the ovary and the uterus, and a more or less complete development, constitutes an extra-uterine pregnancy. Among the theories explaining this mechanical interference with the downward progress of the fertilized ovum, have been advanced the following: Adhesions resulting from inflammatory disease of the ovary, tubes or pelvic peritoneum; congenital malformations; diverticula in the tubes; interference with the normal peristalsis of the tubes from any cause, and preliminary decidual development in the tubes.

The early manifestations of extra-uterine pregnancy prior to rupture, are not characteristic. A woman may present herself to the physician with all the subjective symptoms and many of the signs of an ordinary pregnancy. Both the physician and the patient may be unaware of the true condition until rupture and hemorrhage have occurred. It is claimed that cessation of the menses is

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, April 30, 1924.

not so uniform in extra-uterine as in intra-uterine pregancy, and yet it is possible that in extra-uterine pregnancy, what is usually considered a menstrual flow may be a uterine hemorrhage resulting from the accompanying endometritis. There is usually pain in one or the other side, low down, but this often is associated with a normal pregnancy, and may pass unnoticed by both the physician and patient. By far the most usual picture is that the patient is seized with severe pain in the region of the affected tube, followed by nausea, vomiting, fainting and collapse. The face assumes an intense pallor, the pain persists, and the temperature is normal or more often subnormal. This, then, is the stage at which an extra-uterine pregnancy terminates, either by rupture or abortion through the tube into the peritoneal cavity. If the patient survives the tubal abortion, and if the placental attachment remaining is sufficient to maintain foetal life, secondary abdominal pregnancy may result.

The course of a secondary abdominal pregnancy may closely resemble that of a normal pregnancy, except that the patient is more apt to complain bitterly of the movements of the child. This added pain is explained by the pulling apart of adhesions which exist between the foetal sac and adjoining abdominal viscera. At or near term certain signs and symptoms are said to aid in the diagnosis of abdominal pregnancy: the foetal heart sounds are much louder and nearer; the foetal extremities are more definitely palpated; the position is usually decidedly to one or the other side of the abdomen; the vaginal examination reveals a hard, undilated cervix, and the placenta is often felt and mistaken for a fibroid, as in two cases reported by Hayd and Potter. Theoretically, the uterus can be outlined by vaginal examination and separated from the foetal mass. Symptoms of intestinal obstruction may occur in the mother. Finally, when the foetus has reached term, false labor pains may set in, followed by cessation of the pains, and a gradual decrease in the size of the abdominal tumor. If at this time the true situation is unrecognized, and operative intervention is not instituted, the case may terminate by mummification, suppuration or by adipocere or lithopedion formation.

If, for any reason, a patient presenting the usual subjective symptoms, and any of the objective signs of pregnancy, is examined (and they should all be examined at the first visit), and the uterus, even if only slightly enlarged, is associated with a doughy mass in the region of either tube, one is justified in assuming a tubal pregnancy. The assumption is more urgent if pelvic inflammatory disease has preceded this occurrence, or if sterility has existed for a long time. It is well recognized that operative treatment is indicated at this time. However, if the patient presents herself for examination long after such a picture as the above, and if she gives a history of sudden abdominal pain and collapse at some period prior to her coming up for examination, secondary abdominal pregnancy should be looked for.

Secondary abdominal pregnancy having been diagnosed, the treatment is surgical. If the diagnosis can be established prior to the seventh month, it is imperative to remove it at once, thereby saving the mother an unnecessary hazard. The reason for urging surgical treatment at this time is that the fetus seldom survives to term, is usually weak and short-lived, and often presents abnormalities and deformities produced by pressure from the surrounding viscera. If pregnancy is past the seventh month, and it is desirable to secure a living child, and the mother can be placed under constant observation, it may be justifiable to wait, but it is never safe to wait for the onset of false labor, for the child is usually dead before intervention in its behalf can be instituted. In secondary abdominal pregnancy at or near term, immediate operation is therefore indicated.

The abdomen is opened by a high midline incision, the cord tied and the fetus removed. The rapidity with which this can be done will depend upon the adhesions existing between the intestines and the fetal sac. If the sac is intact, the removal may be done quickly; if the sac has been ruptured, adhesions are more numerous and require more care. Having removed the fetus, the question of how best to handle the placenta presents itself. The sac may be packed with iodoform gauze and the placenta left *in situ*. If it is possible to tie both ends of the sac and remove the placenta, this may be done. The placenta may be left *in situ* and the edges of the sac sewed to the lower end of the incision. My own impression is that it is decidedly safer to leave the placenta, for its removal may invite disaster, in the form of a profuse and uncontrollable hemorrhage.

SUMMARY.

1. Primary abdominal pregnancy, while theoretically possible, is difficult to confirm.
2. Extra-uterine pregnancy, ruptured or unruptured, should be operated as soon as diagnosed.
3. If secondary abdominal pregnancy is proven or suspected, it should be immediately, terminated by abdominal section, if prior to the seventh month.

4. If the diagnosis is made at or after the seventh month, under urgent circumstances, and with the family fully advised as to the hazard, one may be justified in waiting for further fetal development in the hope of securing a living child.

5. At or near term, operative treatment should be carried out at once.

6. Removal of the placenta may be done in carefully analyzed cases, or left *in situ* with drainage, or marsupialized.

The following case is reported to emphasize the important points in the diagnosis and treatment of secondary abdominal pregnancy:

Mrs. E. G. L., aged 33, white, the mother of two children (both living and well), came under the observation of her doctor several months after the beginning of what she thought was a normal pregnancy. There was a history of sudden abdominal pain, followed by collapse, and vaginal discharge of blood, at about the end of the first month. The patient considered this an ordinary abortion, and telephoned her doctor that she had had a miscarriage. He was not called to the house at this time, and therefore had no opportunity of examining her. At about the seventh month, the patient came to the doctor for care of what she assumed to be a normal pregnancy. Her urine at this time showed albumin, and her blood pressure was elevated; she was placed in bed on eliminative treatment.

About the beginning of her eighth month, her automobile overturned and she was thrown violently on her abdomen, across the body of her husband, who was unable to get from under the car. The patient managed to get out and, alone, attempted to lift the side of the car in order to release her husband. She was seized with abdominal pain and nausea, and suffered some shock at this time. She was carried home, put to bed and her family doctor called. He considered the situation due to strain and excitement, and treated her symptomatically. She vomited a great deal at this time and continued to complain of abdominal pain. She complained bitterly of the movements of the fetus.

Three weeks later, on December 17, 1923, I was called to see the patient in consultation. The history of the automobile accident, the early history of so-called miscarriage, the vaginal examination, the loudness of the fetal heart, and the ease with which the fetal extremities could be palpated, led us to the conclusion that we were dealing with a ruptured uterus, the placenta remaining within the uterus and the fetus being outside. Hospitalization was urged, with a view to relieving the condition by abdominal section, but the family decided to wait. At this time the fetus was alive and actively moving.

On December 19, I was again called to see the patient, and at this time she was in very much worse condition. Her temperature was 102° F., and there was marked abdominal rigidity, vomiting, rapid pulse and much pain. The fetal heart sounds were no longer present, and the movements had ceased the day before. The fetal mass could more definitely be made out, well up under the right costal margin. No presenting fetal part could be found in the pelvic outlet. The family now consented to her going to the hospital. The husband was fully advised of the condition thought to be present, and told frankly that the outlook was very grave. The laboratory report of the urine showed albumin, casts, etc. The blood report was as follows: Hb., 70 per cent; red blood cells, 3,680,000; leucocytes, 15,400, with a polynucleosis of 88 per cent.

Under gas-oxygen anesthesia, the abdomen was entered by a midline incision. On opening the peritoneal cavity, thick green fluid escaped. The fetus was found well up under the right costal margin, surrounded by intestinal adhesions and the remains of the sac. The fetus being dead, was tied off and removed. The cord was then followed down and the placenta scooped out. At this point a profuse hemorrhage occurred. It was then that the normal sized uterus was lifted up. However, still being sure of the diagnosis of ruptured uterus from traumatism, we proceeded. The hemorrhage was finally controlled by purse-string sutures about the site of the placental attachment. The uterus, right tube and right broad ligament, were removed, when it became evident that we had been dealing with a secondary abdominal pregnancy, the placenta being attached to the posterior surface of the right broad ligament and the adjacent pelvic floor. The patient did not recover from the shock, and died within an hour.

Several points are illustrated by this case. First, the history of the abdominal pain and supposed miscarriage at about the end of the first month, was not brought out until the patient was dead. Second, her automobile accident was too strongly urged by all of us as an excuse for her symptoms. Third, if she had had a ruptured uterus at the time of the injury, she would surely have had a fatal hemorrhage, or at least more shock—however, Max Ichenhauser, reported a secondary abdominal pregnancy following the rupture of a cesarean section scar. Fourth, an operation on December 17, at which time the fetus was still alive, would have resulted in a live baby, and a chance for the mother. Fifth, the temperature present at the time of operation was probably indicative of the presence of peritonitis, and any line of treatment would have resulted in disaster. Sixth, recognition of the true condition at the proper time would have saved the necessity of admitting an error in judgment, for the placenta would then have been left *in situ*, and drainage instituted.

ABSTRACT OF DISCUSSION.

Dr. N. A. Elder, Nixon: Abdominal pregnancy has been overlooked by our most able men. More care should be taken to exclude this condition when making a diagnosis. It may exist in any pregnancy and it may be confused with certain cases of appendicitis. In 560 cases of tubal pregnancy, 26 were associated with normal pregnancy. Widal found 119 cases of tubal pregnancy associated with normal pregnancy. When there is a history of undue abdominal enlargement or pain of a certain character; when the attachment is near the distal end of the tube in tubal pregnancy, and when the appendix is long and hangs low in the pelvis, abdominal pregnancy is often suspected. Shock follows a considerable hemorrhage. When there is little hemorrhage, there is no more shock than in appendicitis.

Dr. Willard R. Cooke, Galveston: Diagnosis was made difficult in one of my cases by the uncertainty of whether there was an extra-uterine pregnancy or whether the pain was due to adhesions. In thin uterine walls the fetal parts are usually palpable.

The diagnosis, therefore, is not easy. In the second place, the chances for the survival of the fetus before the fifth month are slight. If pregnancy has advanced to the seventh month, it is preferable under certain conditions to wait until the fetus has a chance of viability. The patient should be under most careful observation and the obstetrician should not wait until the onset of false labor before delivering the child.

Dr. Calvin R. Hannah, Dallas: Every abdominal pregnancy should be removed as soon as diagnosed. A colored girl came under my observation in whom we diagnosed abdominal pregnancy and advised the induction of labor. However, a colored doctor was called in who gave her pituitrin. Following the administration of the pituitrin, she grew blind and fainted. She was sent to the City Hospital for ten days and then came back to Baylor Hospital. The *x*-ray showed a cephalic presentation and the fetus was dead. When the abdomen was opened the peritoneum was found to be greatly distended, and gas escaped through the incision like from a punctured automobile tire. This gas was very offensive, showing that putrefaction had set in, and general peritonitis terminated the case.

Dr. Everett Jones, Wichita Falls: I was called as a consultant in a case of abdominal pregnancy. The patient was *in extremis* when seen. Immediate operation was performed and a live fetus delivered, the placenta being easily removed. Hysterectomy was also done on account of a fibroid. The child lived 48 hours after delivery, but was unable to swallow.

Dr. Jeff Miller, New Orleans: All cases of abdominal pregnancy that went to near term in my clinic were in colored patients. The *x*-ray is of extreme value in the diagnosis of abdominal pregnancy. The contour of the child can be outlined more easily in extra-uterine than in normal pregnancy. The sooner abdominal pregnancy is operated the better, as the child is often deformed and does not usually live, and delay in operation is dangerous to the mother. The operation should be performed about the time that the fetus dies.

Dr. Hargrove (closing): I wished to report the case recorded in my paper because I felt that my mistake in handling this case might be beneficial to others. The *x*-ray is undoubtedly very helpful in the diagnosis of abdominal pregnancy. I believe that the placenta in extra-uterine pregnancies should be marsupialized. A hysterectomy was done in the case that I reported because of the attachment of the placenta to the posterior surface of the broad ligament.

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REPAIR OF THE PERINEUM.*

BY

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Labor is physiological but there are not many primiparae who escape some sort of injuries to the birth canal from a normal delivery. Though there may be many severe lacerations and injuries to the birth canal, these should not encourage the obstetrician to perform abdominal deliveries.

The most frequent cause of perineal laceration is a disproportion between the fetus and the soft tissues of the birth canal. Either the head or shoulders are too large, or the elasticity of the tissues is not equal to the demand placed upon them. Other causes of laceration of the perineum are: Rapid deliveries, spontaneous or operative; failure to correct faulty mechanism, such as too rapid extension, or often failure to maintain flexion until the occiput passes under the symphysis and a narrow pubic arch which causes the head to plough through the tissues, instead of gliding over the elastic, dilating tissues. The cervix may be drawn into the vagina if the delivery is made by forceps, or by breech extraction through an undilated cervix. Faulty mechanism may cause the fascia of the vagina to be torn from its attachment, ultimately resulting in prolapse of the pelvic organs. To prevent this, delivery through the birth canal should not be attempted until full dilatation and retraction of the cervix and upper part of the vagina, has occurred. Contributory causes of lacerations are: Constitutional diseases, advanced age, scar tissue and tissues that are non-elastic in patients whose prenatal care has been neglected. To recognize tissue that will dilate rather than tear requires that sixth sense or instinct so necessary to estimate the potentiality of the perineum.

The most frequent cause of cystocele is the separation, or tearing, of the fascia between the bladder and vagina. In cases where the fetus is very large, or if there has been faulty mechanism on the part of the obstetrician, there may be a separation of the urethra and base of bladder from the posterior wall of the pubis, or stretching or stripping of the pelvic connective tissue from its attachment, resulting in prolapse of vagina, uterus, urethra and bladder. Rectocele is due to separation of the fascia and the levator ani muscle.

For the proper treatment of injuries and lacerations of the perineum an accurate knowledge of the anatomy of the pelvic tissues

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924.

is required. The obstetrician possessing this knowledge becomes an asset to his patient during pregnancy, delivery and postpartum care. The obstetrician should teach his patient the necessity of physical fitness for the hazards of pregnancy and labor. As a rule, the tissues of these patients will endure greater strain, and probably have greater elasticity than those where prenatal care has been neglected. Common sense teaches us that the smaller the baby, the less injury to the perineum. Hence, prenatal care has its place in preventing lacerations.

Episiotomy has a distinct field in deliveries where the tissues will not stretch, or where a disproportion exists between the head and the outlet. In many instances, it is less harmful to do a medial perineotomy, thereby securing a straight line injury rather than a tear in many directions. Cutting *between* the muscle is much better than cutting *through* the muscle, thereby destroying the nerve supply and causing atrophy of the muscle. If the repair is not done, hypertrophy of the muscle, even where the nerve has not been destroyed, may often occur because of the extra compensation required of it. Many times tears are heralded by the trinkling of bright red blood over the perineum between uterine contractions, which usually are indications for episiotomy. Episiotomies, or tears that separate the pubo-rectal fibres, or the whole of the levator ani from the sphincter ani, should be carefully repaired. If this is not done or improperly done, it will eventually lead to many morbid conditions, such as cystocele, rectocele, prolapse, cervicitis, and reflex conditions of many kinds.

To properly repair a laceration of the perineum where the levator ani or portions of this muscle have been separated, the operator should first inspect the field, recognize the tissues involved, the extent of the injury and their approximation. The neglect of this precaution accounts for many failures to obtain good results. After recognizing the extent of the injury, immediate repair should be made, in order to restore all tissues to their former locations so that they may continue to function normally.

If the mucous membrane of the vagina is torn, either laterally or medially, as is frequently the case, it should first be repaired by bringing the edges together with interrupted, chromic catgut sutures, sufficently deep to include the tissues below the mucous membrane, and working from within out to the hymen. After the interrupted sutures are inserted, the vagina should be the same hollow organ as previously, with the broken muscles of the perineum below.

In bringing the muscles together, a few valuable points should be remembered. The central point of the perineum should be replaced, so that the muscles anterior to this point may function as formerly. From previous inspection, the muscles and different tissues are recognized. They should be approximated by twenty-day chromic catgut sutures. It is usually more convenient to place the lowest suture first. This suture, as all others, should be placed so that it will go *around* the belly of the muscle rather than through it. The other sutures should be placed before any of them are tied. The suture at the vaginal outlet should take in a large amount of tissue around the muscle, and deep enough to approximate the tissues posterior to the vaginal wall. Special attention should be given to the central point of the perineum. If possible, the transverse portion of the levator ani should be brought into this field, so that the muscles may act and contract as previously. Before tying the sutures, it is well to bring them together and see if the tissues are anatomically approximated. One thing must be borne in mind, sutures should not be tied tightly. Tight sutures will cut off the circulation, and act as a potential factor for infection. I believe this is a very vital point, upon which many of us fail to lay emphasis, and which often accounts for broken down perineums. The tissues above the levator ani, and below the skin of the field, should be brought together. This will act as a cover to the buried sutures, and will also bring the fasciae of the muscles as nearly as possible into their own position. This suture should not be too tight, for it, too, may disturb the circulation. The skin is now brought together by a subcutaneous silkworm suture, starting at the vagina, near the junction of the mucous membrane and skin, passing over to the other side, and back and forth, not deep enough into the skin to get the hair follicles. This suture is continued down to the lower border of the incision, and there passed out through the skin, half an inch from the skin incision and from the anus. The suture may be held in place by applying knots to each end of it, or bullets may be compressed on the suture ends. This suture brings the skin together, covers the field, and tends to lesson danger of infection. Usually, union takes place within a week. I find that union will take place in practically all of the cases where repairs have been done in this manner, immediately after delivery.

ABSTRACT OF DISCUSSION.

Dr. J. W. Bourland, Dallas: Doctor Hannah did not mean that he left the head on the pelvic floor indefinitely. Prolonged pressure on the floor will

produce a good deal of trauma, and this will be conducive of bad results in repair. If the perineum shows elasticity, I take the chance of a tear. If the perineum is very rigid, episiotomy will lessen the danger of tearing the muscles away from their attachments, and will conserve the bladder support and prevent rectocele as well. I use the lateral episiotomy, as the suture line is not contaminated by the lochia. In central episiotomy, there is greater danger of injury to the rectum.

LIVER FUNCTION TESTS.*

BY
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and
ELIZABETH MORFORD, B. A.,
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The liver may easily be said to be the most important organ in the body, and because of its varied physiological action, to be intimately associated with many of the vital functions of life. Briefly, these functions are: The formation and excretion of bile, the formation and storage of glycogen and fat, the formation of urea, and the removal and neutralization of certain poisonous products from the blood stream, such as the skatols, indols and phenols.

This diversity of function has led to frequent attempts on the part of many investigators to ascertain the presence of disturbances in hepatic function. Many of these tests are now of historic interest only, and others, because of their intricacy, have never been put to general clinical use. The ability of small parts of the liver to successfully carry on for long periods of time the activities normally accomplished by the entire organ, is another factor contributing to the difficulty of successfully testing hepatic function.

Three tests of liver function are at the present time occupying the attention of various workers, these being the levulose-tolerance test, the crise hemoclasique of Widal and the phenoltetrachlorphthalein test.

Dr. Meyer Bodansky of the Department of Biological Chemistry in the Medical Department of the University of Texas, has for some time been engaged in the study of the effects of various substances on the liver, as determined by the ability of the liver to utilize certain sugars. We are indebted to him for the following brief discussion of levulose as a test for liver function:

"It has been observed that after the ingestion of sucrose, glycosuria is more frequent in cases of liver involvement than in normal individuals. Strauss[1] attributed the lowered tolerance in these cases to a diminished utilization of the levulose arising from the ingested sucrose. He therefore proposed levulose as a test for hepatic function. After the administration of 100 grams of this sugar, the urine was analyzed for what was presumably levulose, the appearance of a reducing sugar being regarded as a positive test. Later investigators have shown, however, that the tolerance for levulose as determined by this method is so variable in normal individuals that the Strauss test is totally unreliable.

"Measurements of levulose tolerance by determining the effect on the blood-sugar have yielded more uniform results. Spence and Brett[2] report that in certain cases of toxic jaundice due to arsphenamine, a valuable indication of the efficiency of the liver may be obtained by estimating the changes in the blood-sugar concentration which follow the ingestion of levulose. Very recently this method has been employed by Covell[3] in determining the degree of hepatic inefficiency in amebic dysentery, and by Tallerman,[4] who made a study of the hepatic condition in pregnancy.

"The subject has been studied experimentally by Bodansky[5, 6 and 7]. When administered to normal dogs, fructose is less effective than glucose or galactose in producing alimentary hyperglycemia. Dogs (and the same is true for human subjects) show relatively slight variations in their tolerance for levulose. Following the administration of 3 gm. of levulose per kilo. of body weight, there has never been observed in normal dogs an increase of more than 35 mg. of blood-sugar, and in most cases the increased concentration was not greater than 20 mg. in 100 cc. of blood. A study of carbohydrate tolerance has been made in experimental derangements of the liver due to chloroform, phosphorus, alcohol, and a number of the derivatives of hydrazine. The results, supported by pathological findings, show clearly that the levulose tolerance test is of great value in measuring the degree of liver involvement in experimental animals. The method has also been used to demonstrate that the restoration of the function to convert levulose to glycogen runs a course parallel to the regeneration of liver tissue, following severe liver injury due to prolonged chloroform anesthesia. Lowered tolerance for glucose and galactose is likewise associated with extensive hepatic involvement. However, glucose cannot be used in testing liver function, because other factors may influence the tolerance for this carbohydrate. Similarly, galactose is of relatively little value in this regard, owing to the marked individual variations exhibited by normal animals in their tolerance for this sugar."

A blood-sugar determination is made with the patient fasting. After the administration of the levulose, blood-sugar determinations are made at one and two hour intervals. A delay in the return to normal or nearly normal after a two-hour interval, is considered pathological.

The crise hemoclasique described by Widal is, briefly, a leucopenia following a protein meal. The hypothesis upon which Widal worked was that one function of the liver is to arrest peptones and proteoses and to transform them into innocuous forms, which he called the "proteopexic function." Feinblatt[8] has found this function deficient when

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

1. Strauss, H.: Deutsch. Med. Woch., 1901, Vol. xxvii, p. 757.
2. Spence, J. C., and Brett, P. C.: Lancet, 1921, vol. ii, p. 1362.
3. Covell, G.: Guy's Hosp. Rep., 1923, Vol. lxxiii, p. 354.
4. Tallerman, K. H.: Quart. J. Med., 1923, Vol. xvii, p. 37.
5, 6 and 7. Bodansky, M.: Jour. Biol. Chem., 1923, Vol. lvi, p. 387; 1924, Vol. lviii, p. 515; 1924, Vol. lviii, p. 799.
8. Feinblatt: Arch. Int. Med., 1924, Vol. xxxiii, p. 210.

there was gross organic damage to the liver, and frequently when there was no evidence to indict the liver. His interpretation is that the test is to be regarded as relating to one particular function of the liver, the proteopexic function, and that it indicates a functional defect of the liver, perhaps transitory, which gives rise to a non-specific anaphylactic reaction. It has been found that with the removal of the cause of liver dysfunction, as with the removal of the gallbladder in cholelithiasis, a positive test becomes negative.

In clinical work the leucopenia is, as a rule, the only change studied. However, the Widal liver function test is characterized in addition by a fall in blood-pressure, a hypercoagulability of the blood, and a change in the refractive index of the blood serum.

Phenoltetrachlorphthalein was first suggested as a means of studying liver function by Abel and Rowntree[9], in 1909, when they found that it was excreted entirely by the liver. Rowntree, Hurwitz and Bloomfield[10], in 1913, reported a test depending upon the amount of dye found in the stool after intravenous administration of a measured amount of the dye. This method was rather clumsy and tedious and, in 1916, McNeil[11] utilized the duodenal tube to determine the amount of dye eliminated in the bile. The preparation of the dye used until 1921 was very unstable, and required special preparation before injection. Aaron, Beck and Schneider[12], in 1921, produced a stable preparation of the dye. In 1922, Rosenthal[13] published a fairly simple technique for the testing of liver function with phenoltetrachlorphthalein. He injected 5 mg. of the dye per kilo of body weight, into one of the veins of the arm. In normal individuals, at the end of fifteen minutes only from 2 to 6 per cent was found present in the plasma, and the disappearance of the dye was practically complete within forty to sixty minutes.

The literature of the past two years on the Rosenthal test is voluminous, and it is impossible and unnecessary in the limited scope of this paper to attempt even a brief review. A technique devised by one of us has been used, which we consider somewhat simpler than the one described by Rosenthal.

An amount of the dye 1 cc. in excess of that required for patient, is drawn into the syringe, and a reading made of the position of the plunger. The required amount of dye is then injected into the vein. Since the dye is highly colored and concentrated, both readings are best made by holding a light just below and to one side of the syringe. The meniscus formed by the plunger can easily be made out, and an accurate reading made of the amount of dye injected.

The standards for comparison were made according to Rosenthal's method. In a recent report, Bloom and Rosenau,[14] have, by the addition of a small amount of acetone (1 cc. of acetone to 1 cc. of the serum, the resulting precipitate being centrifuged) rendered highly jaundiced fluids almost water-clear without interfering with the color determination. By the addition of acetone to the color standards to compensate for that in the test specimens, standards that will retain their color for one month have been produced. We have had no experience with this modification.

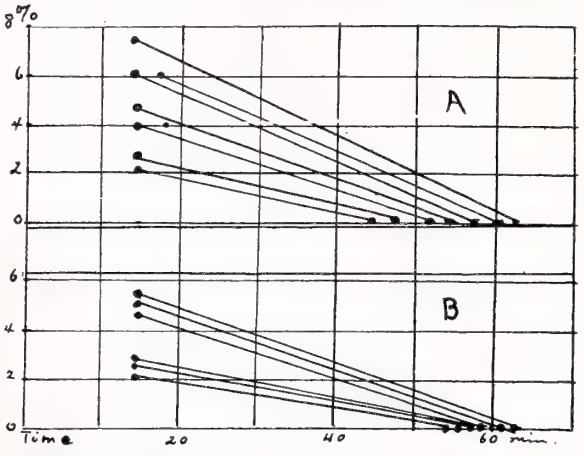

Chart I. Normal curves. A—In healthy subjects; B—In extrahepatic lesions. (After Rosenthal.)

Chart I is taken from Rosenthal's preliminary report, and is shown here to illustrate the normal curves obtained, "A" being from normal individuals and "B" from patients with extra-hepatic disease. The curves obtained by us in Cases 4, 5, 6 and 7, and shown in *Chart II*, are similar to those in group "B."

The cases whose curves are plotted in *Chart II* are as follows:

1. Syphilitic cirrhosis of the liver, marked ascites; treated; white, male; aged 50 years.
2. Syphilitic cirrhosis of the liver; ascites; male; Mexican; aged 34 years.
3. Amebic dysentery; no gross involvment of the liver; white; male; aged 41 years.
4. Convalescent after removal of gallbladder; afebrile; white; male; aged 40 years.

9. Abel and Rowntree: Jour. Pharm. and Exp. Therap., 1909, Vol. i, p. 231.
10. Rowntree, Hurwitz and Bloomfield: J. H. H. Bull, 1913, Vol. xxiv, p. 327.
11. McNeil, H. L.: Jour. Lab. and Clin. Med., 1916.
12. Aaron, Beck and Schneider: Jour A. M. A., 1921, vol. lxxvii, p. 1631.
13. Rosenthal: Jour. A. M. A., 1922, Vol. lxxix, p. 2151.
14. Bloom and Rosenau: Jour. A. M. A., 1924, Vol. lxxxii, p. 547.

5. Amebic dysentery; treated for two weeks; male; Mexican.

6. Decompensation of heart and mild chronic passive congestion of the liver; negro; male; aged 50 years.

7. Chronic myocarditis with no break in compensation; male; white; aged 60 years.

Chart III, represents the curves obtained by Feinblatt in a series of eighty normal

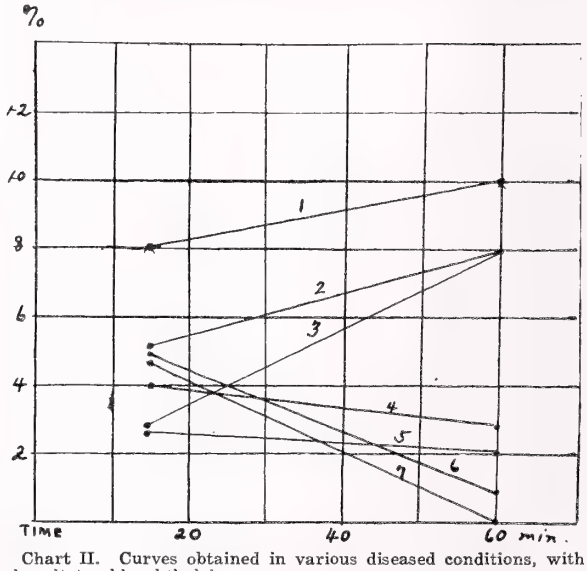

Chart II. Curves obtained in various diseased conditions, with phenoltetrachlorphthalein.

individuals tested for the presence of the crise hemoclasique of Widal. In every one of the cases it is to be noted that a leucocytosis occurred.

Chart IV, represents our results by the Widal method in the following cases:

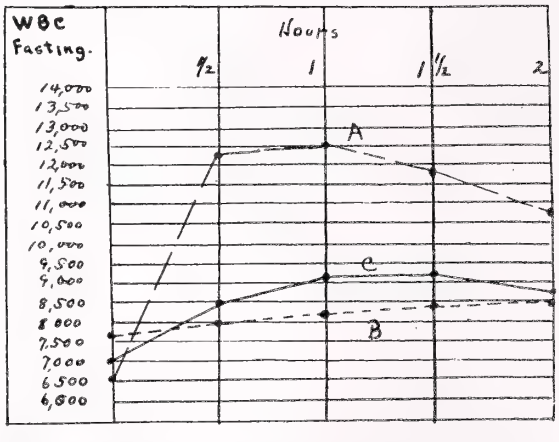

Chart III. Widal tests on normal individuals. (After Feinblatt.) A—Maximum; B—Minimum; C—Average of 20 normal cases.

8. Infected thumb; receiving salvarsan; male; Mexican; aged 40 years.

9. Carcinoma of the pancreas, with metastasis to liver; male; mexican; aged 40 years.

10. Syphilitic cirrhosis with ascites; same as *Case No. 2*, in *Chart II*.

11. Amebic dysentery; taking emetine; same as *Case No. 3*, and *Chart II*, but one week earlier.

12. Convalescent after cholecystectomy; same as *Case No. 4*, *Chart II*.

A comparison of the results obtained by the two tests is a fruitless task—a point recently emphasized by Feinblatt inasmuch as each test determines a different function of the liver.

Except in such chronic conditions as carcinoma of the pancreas with liver metastasis and extensive cirrhosis, no marked change from the normal was observable in either of the tests used. The well-known property of the liver to compensate for injuries to certain parts of its structure probably accounts for this fact. Several years ago one of us[15,16] noted that in chronic changes in the liver no change was to be found in the ammonia content of the blood; while in acute processes, even though apparently involving relatively smaller areas of the liver, a definite increase was noted in the amount of ammonia passing over into the systemic circulation. We believe that we have an analogous situation with the tests described.

SUMMARY.

1. A limited number of cases of various conditions are reported.

2. The results of three function tests, indicate that it is impossible to determine all the functions of the liver by any single test.

3. A slight modification in the usual technique of the phenoltetrachlorphthalein test (which we believe simplifies the test somewhat) is described.

4. In several moderately severe hepatic cases, a decided change from the normal is noted with the phenoltetrachlorphthalein test.

5. Results of our study convince us that changes from the normal with this test indicate hepatic dysfunction. This test as it now stands, is a valuable adjunct to our methods of study of the functional capacity of the liver.

W. B. C.	Case 8	Case 9	Case 10	Case 11	Case 12
Fasting 12 hours	9,200	14,200	3,650	14,200	9,300
20 minutes after drinking 1 glass milk	8,100	11,850	3,100	11,300	5,750
40 minutes after milk	7,800	11,100	3,250	11,400	6,400
1 hour after milk	7,800	12,800	3,600	10,800	6,100
2 hours after milk	8,000	13,000	3,450	12,100	7,400

Chart IV. Widal tests in various diseases.

15 and 16. McNeil, H. L., and Levy, M. D.: Jour. Lab. Clin. Med., 1917, Vol. xi, p. 509; Vol. iii, p. 18.

ABSTRACT OF DISCUSSION.

Dr. J. E. Robinson, Temple: The author is to be commended for his boldness in attempting a discussion of liver function tests, something like twenty having appeared in the literature of 1923 alone. We are familiar with only two of the three tests decribed somewhat in detail by the author. The procedure outlined by Widal is, at best, only a presumptive test, and if associated with liver dysfunction at all, it probably deals with only one of its many activities. We have had no experience with levulose as a means of determining liver function.

We have been especially interested in phenoltetrachlorphthalein, which was first prepared by Orndorff and Black of Cornell University, in 1908. Its properties were described by Abel and Rowntree in their search for a cathartic of prolonged action, in 1909, and it was suggested by them as a means of determining liver function, in 1913.

Having had rather disappointing experience with the dye at that time, I followed with interest the articles by Rosenthal, appearing in 1922. If the experiments of Pelkin and Whipple, which led them to the conclusion that the conjugation of phenols was a function of liver parenchyma cells and of no other body cells, was correct, phenoltetrachlorphthalein is an ideal substance for testing liver dysfunction.

While, as suggested by the author, the literature on phenoltetrachlorphthalein has been somewhat voluminous in the last few years, most of it has had to do with other methods than that described by Rosenthal. In those contributions dealing with his method much of the texts are taken up with a description of the technique, etc., with very few reports of cases, I have been able to collect only a few hundred cases from the literature, and only a very few of these have been confirmed at the operating table, or by autopsy.

In our experience at the Kings Daughters Hospital during the past 15 months, during which time this test has been employed in about 75 cases, we are of the opinion that it offers great possibilities. We do not feel that we are able, with this limited number of cases and with the small number reported in the literature, to properly interpret our readings. We have been very much surprised, at times, by the findings in the operating room and at autopsy.

In our work, which is largely surgical, it seems to offer most as a means of prognosis and, to a limited extent of diagnosis in gall-bladder cases. The amount of gall-bladder disturbance without sufficient hepatitis to impair the liver function which we encounter is surprising. In all of our cases which have shown delayed liver function, the surgeons have also mentioned more or less disturbance of the pancreas. Whether or not we will find that hepatitis and pancreatitis are more often associated than we have formerly supposed, will depend, of course, upon a larger number of observations.

This test also offers a great deal to the obstetrician, helping to differentiate between the toxic vomiting of pregnancy and neuroses. It follows very closely the gravity of the clinical symptoms in these toxemias and will perhaps decide the proper time for producing therapeutic abortion or terminating gestation.

Simultaneously with Rosenthal's experiments, Delpart of the University of California, was conducting similiar experiments on injured livers, using rose bengol as a basis for his experimentation. While this dye is probably inferior to phenoltetrachlorphthalein, his work in many respects confirmed that of Rosenthal.

Dr. Levy (closing): Dr. Robinson has followed his cases longer than we have followed ours. Levulose is the best sugar to use, but it is very expensive. It costs $36.00 per pound. The phenoltetrachlorphthalein is undoubtedly the best test and is easy to carry out. It is almost as simple as the kidney function phthalein test. In one case we had an infiltration of dye into the tissues and a mild local reaction followed, but no ill effect resulted. The general reactions have not been bad, although some patients have been quite sick when the injections were made. One solution of 50 mg. to the cc. prepared by H. W. & D., is apparently safe to inject, and I do not believe this will produce any serious reactions. Some reactions are probably due to the water used in preparation of the solution.

MULTIPLE SCLEROSIS, WITH REPORT OF A CASE.*

BY

C. W. STEVENSON, M. D.,

WICHITA FALLS, TEXAS.

Multiple sclerosis was formerly looked upon as a very rare disease, but recent records prove that it is not so uncommon in this country as was once believed.

Wechsler[1] states that up to 1921 there were 1,970 cases recorded, 518 of these being from America. Cassirer says that next to syphilis it is the most common organic disease of the nervous system. One of the most important reports of recent years is that given by Pearce Bailey[2] in his "Report on the Incidence of Multiple Sclerosis in the Army." He found that in 3,500,000 men examined there were 6,915 cases of organic nervous diseases, and that of this number there were 511 cases of multiple sclerosis, being 7.4 per cent of all the organic nervous diseases found. Another interesting point is the number of cases of multiple sclerosis in proportion to those of syphilis of the nervous system. Sachs-Friedman[3] states that in the neurological service of Mount Sinai Hospital there were 3.9 per cent of the patients had multiple sclerosis and 23.8 per cent had syphilis of the nervous system.

It has been found that males are more frequently affected than females, in the ratio of 3 to 2; that multiple sclerosis is most common in the rural population, and that it occurs more frequently among the married than the unmarried. This latter may be due to the fact that the disease is more prevalent between the ages of twenty to fifty, more especially twenty to thirty. It is of special interest to note the occurrence of this disease in members of the same family, as evidently exists in the case reported in this paper. In the literature there have been a number of familial cases reported. Wechsler reports

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*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 29, 1924.

1. Wechsler, I. S.: Arch. Neur. and Psych., Vol. viii, p. 59, July, 1922.
2. Bailey, Pearce: Arch. Neur. and Psych., Vol. vii, p. 582, May, 1922.
3. Sachs, B., and Friedman, E. D.: Arch. Neur. and Psych., Vol. vii, p. 551, 1922.

one mother and son; Eickhart, one mother and child; Klousner, a brother and sister; Weisenburg, a brother and sister, and probably a third member; and Reynolds, one brother and two sisters.

ETIOLOGY.

The etiology has been obscure. Until recently there have been three main theories: (1) That the disease was due to a congenital or developmental defect or weakness in the central nervous system; (2) that it was due to exogenous factors, either chemical or bacterial, affecting a previously healthy nervous system, and (3) that it was due to a combination of these—a weakened nervous system poisoned by external agents.

The most recent theory has been that advanced by Julian Loudin[4] and others, that it is caused by some type of spirochete. There has been much discussion of all these theories. Davenport[5] says, "I venture the suggestion that whatever may eventually prove to be the endogenous cause of multiple sclerosis, the factor of heredity cannot be left out of consideration." Barker,[6] in an address on "Exogenous Causes of Multiple Sclerosis," states as his conclusion that, if exogenous factors play any role at all in the etiology of the disease, they must act either as predisposing influences for the true cause, or as aggravators of a disease already started by the true cause.

Stevenson[7] answers the spirochete claim in reporting the microscopic examination of the nervous system of four cases of multiple sclerosis, and reaches the following conclusions: "In the study of thirty-seven sections from four cases of multiple sclerosis stained by Jahnel's new method, no spirochetes were found." These studies indicate that spirochetes are absent or infrequent in multiple sclerosis tissue. If spirochetes are held to be associated with multiple sclerosis, they probably cannot be demonstrated by the most dependable silver stains now available.

From all the evidence thus far given, we have to conclude that as yet no definitely proven etiological factor in this disease has been discovered.

PATHOLOGY.

I will not in this paper discuss the pathology of this disease further than to state that, as the name implies, it is characterized by localized areas of sclerosis, usually scattered throughout the brain and cord, but sometimes limited to either.

4. Loudin, J.: Ann. Clin. Med., Vol. i, p. 231, January, 1923.
5. Davenport, Chas. L.: Arch. Neur. and Psych., Vol. viii, p. 51, July, 1922.
6. Barker, Lewellys F.: Arch. Neur. and Psych., Vol. viii, p. 47, July, 1922.
7. Stevenson, S. G.: Arch. Neur. and Psych., Vol. ix, p. 88, January, 1923.

SYMPTOMATOLOGY.

It has just been stated that the pathological lesions may be at any point in the brain or cord, so the symptoms may naturally be expected to vary with the location of the lesion. In this disease, however, there is a more or less definite chain of symptoms. When this disease was first described, the diagnosis depended on the old triad of symptoms, scanning speech, nystagmus and intentional or volitional tremor. We now know that these symptoms are often late in making their appearance, and that the diagnosis is more often made before that time. There are a great number of symptoms, all or a part of which may be present in any one case, such as: (1) Easy fatigue, weakness and stiffness of one or both upper and lower extremities, culminating in spastic paraplegia, associated with increase of deep reflexes and a positive Babinski sign; (2) nystagmus, generally horizontal, slight at the beginning, gradually becoming more marked; (3) ataxic tremors of the upper extremities and tremor of the head; (4) marked diminution or loss of abdominal reflexes; (5) spastic ataxia, and ataxic gait and station (including Romberg's symptoms); (6) scanning speech, or some form of disarthria; (7) pallor of the optic discs, especially of the temporal halves; (8) disturbance in facial innervation, often slight; (9) explosive laughter and emotional instability; (10) normal remissions, often leading to disappearance of the symptoms; (11) transitory ocular palsies with diplopia; (12) vague objective and subjective sensory disturbances, the objective consisting of (a) posterior column disturbances, and (b) pain, touch and temperature disturbances, and the subjective of numbness, tingling and pain; (13) disturbance in vesical reflexes; (14) tenderness of the spine, chiefly mid-dorsal; (15) dizziness (vestibular origin); (16) mental changes, and (17) auditory nerve involvement.

Important negative signs and symptoms are: (1) Pupils generally active with occasional hippus, and (2) biologic tests negative, except for the occasional presence of globulin, and slight increase in the number of cells in the spinal fluid in a few instances.

In making a diagnosis of multiple sclerosis, there are a number of diseases from which it must be differentiated, such as paralysis agitans, tumor of brain or cord, general paresis, hysteria, etc., but there is really only one differential diagnosis of paramount importance, and that is from multiple cerebrospinal syphilis.

Either of these two diseases may have any or all of the symptoms given above. The

main differentiating points lie in the so-called negative symptoms which have just been given, *i. e.*, the pupil reaction and the serological findings. In multiple sclerosis the pupil is practically always normal in contour, size and reaction to light and accommodation, while in fully 90 per cent of cases of cerebrospinal syphilis, the pupils show some abnormality, being immobile, irregular or unequal. In multiple sclerosis, Wassermann reactions in both blood and spinal fluid are negative, with negative spinal findings, while in cerebro-spinal syphilis, there is a positive blood Wassermann, a positive spinal fluid Wassermann, and an increase in globulin and in the cell count in the spinal fluid.

In reporting the following case, I take no credit for the diagnosis, as it is as near a typical text-book picture as could be found, and the diagnosis was apparent almost as soon as the patient was seen.

CASE REPORT.

Mrs. T. J., aged 30 years, entered the hospital, complaining of paralysis, nervous trouble and stomach trouble. The family history is interesting, in that she has one brother who is said to have practically the same nervous symptoms, evidently a case of familial multiple sclerosis. She had had the ordinary diseases of childhood, and influenza in 1920. Her menstrual history was negative. She had been married for nine years and had two children, both living and well. No miscarriages had occurred. The present illness began about seven years ago, at which time she began to gradually lose the use of her feet and legs, and this rapidly became worse until her limbs were completely paralyzed and she was helpless for two months. During this time, she noticed numbness of her feet and legs, weakness of the arms, and later, paralysis of one side of her face. In a few months' time she began to improve, until at the present time she is able to take care of herself without assistance, but still walks with a typical spastic gait. Her condition has been unchanged for some time, except that the tremor and speech are growing worse, and that she is developing marked mental disturbances, such as, loss of memory, emotional outbreaks, despondency, etc.

The general physical examination was negative, except for findings in the nervous system. Her gait was of the spastic paraplegic type. There was a positive Romberg, the ataxia being manifested more antero-posteriorly than laterally. Nystagmus was pronounced, particularly in the lateral direction. The pupils were equal, regular in contour, and reacted to light and accommodation. The triceps and biceps reflexes were slightly exaggerated and the abdominals absent. The knee jerks were exaggerated, more on the right. The achilles jerk was exaggerated, and there was a positive Babinski on the right side. There were coarse tremors of the tongue and eyelids and a very pronounced volitional or intentional tremor of the right hand and arms. She was unable to raise a glass of water to her mouth, or write her name legibly. Her speech was typically scanning in character. Her mental condition showed loss of memory, emotional instability and tendency to melancholia.

The laboratory findings were as follows: blood count and urine normal; blood Wassermann negative; provocative Wassermann negative; spinal fluid Wassermann negative; spinal fluid under normal pressure; cell count of five cells per cubic mm. of spinal fluid, and globulin absent. The *x*-ray examinations of the spine and head were negative.

The diagnosis of multiple sclerosis in this case was apparent, as we had the three classical symptoms, scanning speech, nystagmus, volitional tremor, in addition to loss of abdominal reflexes, spastic ataxia, normal pupils and normal laboratory findings, with a history of remission of symptoms and mental disturbances.

CONCLUSIONS.

1. Multiple sclerosis is not as uncommon as was once thought.

2. It is not necessary to have the classical triad of symptoms in order to make a diagnosis.

3. The important disease from which multiple sclerosis must be differentiated is cerebro-spinal syphilis.

4. It is most essential that this differential diagnosis should be made, as the prognosis and treatment of the two diseases are quite different.

ABSTRACT OF DISCUSSION.

Dr. E. W. Applebe, Houston: I am in entire agreement with Doctor Stevenson that multiple sclerosis is much more common than is generally supposed. In the last year I have seen six cases, only one of which had been previously recognized. The cell count of the spinal fluid should always be made. It may run from no cells to 40. While it is occasionally difficult to differentiate multiple sclerosis from cerebrospinal lues, we have the serology to help us, and also the clinical fact that nystagmus, which is common in multiple sclerosis, is very rare in lues. The real problem is the differentiation between multiple sclerosis and hysteria. It is in these cases that the abdominal reflexes and the fundus examinations are of such paramount importance.

Dr. Marvin L. Graves, Galveston: We have always considered multiple sclerosis rare. Twenty-five years ago, when I was Superintendent of the Southwestern Insane Asylum, I saw one case that was followed carefully to autopsy. Grayish red plaques were found over the spinal cord. We sent the specimen to Dr. Allen J. Smith, of the Medical Department of the University of Texas, and he reported the case as one closely resembling multiple sclerosis but not really that disease. For nineteen years we have been on the lookout for cases of multiple sclerosis at the John Sealy Hospital. I find it very rare. Not a single case has come to autopsy during the past nineteen years at John Sealy Hospital.

Some years ago, at one of our State Medical Association meetings, a neurologist of New Orleans reported 200 cases of multiple sclerosis, and thought the disease not uncommon. This amazed me at the time, and so I looked up Starr's statistics in New York, and found that he reported one case of the disease in 35,000 clinical cases of nervous disease.

The greatest difficulty in the diagnosis is found when the lesions are localized and not disseminated. Such a case may produce only a paraplegia and is diagnosed only with the utmost difficulty. It is best to keep a careful clinical record of the symptoms and pathological findings, and, if possible, to confirm such cases at autopsy.

THE PLACE OF ANATOMY IN THE MEDICAL CURRICULUM.*

BY

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That a subject so important as anatomy, a subject so difficult, a subject with which every physician, every surgeon, every general practitioner cannot be too intimately familiar, should be relegated to the freshman year, in any medical college curriculum, seems beyond belief. That this should have been done by experts in medical education seems only explicable on the presumption that before it was thus relegated there was something so radically wrong with anatomical teaching that the claims of anatomy had failed to impress themselves on this Association.

Surely I am not antiquated in my conviction that every clinician in his effort to diagnose and interpret disease should be able first of all to think anatomically. True, he must also think in terms of physiology and pathology, but these are built on a framework of anatomy. Do not clinicians, be they physicians or surgeons, want their junior and senior students to know every region of the body as perfectly as possible? Who can teach the differential diagnosis of spleen and kidney tumors to the man who lacks a vivid picture of the interrelation of kidney, spleen and colon? Who can teach the simplest nervous diseases to the man who does not carry with him to the sickbed a clear conception of the anatomical and functional interrelation of the centers and tracts of the brain and cord? What student can appreciate the technique of a breast operation who has not a mental picture of the axillary lymph nodes? Who can understand referred pain who does not first know the functional relations of the cord segments?

Granted, then, the importance of anatomy, how are we to fix it in the student's mind so that it will stay with him, not through his student and interne years only, but more or less all of his life? Most certainly not by concentrating all of his dissecting in the freshman year. He must grow up in an anatomical atmosphere. Anatomy must have time to soak in; his anatomical pictures must be impressed on his brain again and again, until they have some permanence. To attain this end, instead of wearying the freshman with four-hour dissecting periods at a time when he can only have a feeble conception of all the terrible complexity of the machine he has later to try to set right, I would distribute his ordinary dissection into two-hour periods throughout his freshman and sophomore years, and I would revivify his freshman-sophomore impressions by a laboratory course of applied anatomy in his junior year, when he is beginning to be appreciative of the clinical side of things.

And how shall we teach gross anatomy? I have been told that, given a student with a fair premedical training in the natural sciences, it should be enough to give him a cadaver and suitable text-books, and that with these he should be able to acquire an anatomical knowledge of the human body, largely on his own initiative. I am reasonably well trained in human anatomy, but with all my training I could not acquire an adequate knowledge of the anatomy of any other mammal, no matter how well embalmed, by one dissection with the aid of the best of text-books. How impossible is it then for an average student, even if he has dissected a mammalian type in the zoological laboratory, to get the most out of his first (and only) dissection of the human body, if he be left largely to his own unaided efforts, be he ever so earnest and his text-books and atlases ever so perfect.

In some respects his training in the laboratory of zoology is a handicap. He has dissected and read from the wrong point of view. He has no conception of the details, the accuracy of anatomical knowledge that is necessary for the doctor.

I have been told that I spoon-feed my students. Perhaps so, but they come to me as babes, and at least they get some nourishment, even the most puny of them.

I have been told that it is absurd to require students to know origins and insertions of muscles, relations of arteries and viscera, but I have yet to find among my old students the man who complains that I required him to know too many details of anatomy. Our young doctors must go to the sickbed with a reasonably detailed memory of the whole construction of the machine he is called on to repair, or at least put in the way of repairing itself. It is my aim that my students shall have become personally so intimately familiar with the human body that they may at any time go to their old text-books, and when they read them, say, "Yes, I remember seeing that."

And what about the exquisite training of eye and hand, the deftness in using knife and forceps that can only be got in the dissecting room? What can teach these better than the careful cleaning of a muscle? It is greatly to be regretted that limited time com-

*Read before the Association of American Medical Colleges Ann Arbor, Michigan, March 2, 1923. Introductory remarks of the author have been omitted.

pels us to clean most vessels so largely by blunt dissection.

Just here is where the careful dissection of cutaneous nerves comes in. Where can hand and eye have better training, and, incidentally, how can the future neurologist better learn the difference between peripheral distribution of cutaneous nerves, and radicular sensory areas? Can a man who has not carefully and intelligently dissected the abdominal wall understand the theory of abdominal incisions, that will give at once free access to the abdomen, and strong abdominal walls, by avoiding subsequent muscular atrophy? How can you better teach visceral topography than by giving the student a laboratory exercise in outlining the viscera in his own particular subject on a life-size chart, immediately after the abdomen has been opened and before the viscera have been disturbed? How better train touch and sight; how better impress the clinical value of the subject; how better teach the student to observe accurately and to record his own personal observations? Surely he will thus learn that every abdomen is an unexplored country, an unrifled treasure house of invaluable information.

What about the priceless opportunity of dissecting carefully the lymph glands of the head and neck, learning them on the body, confirming by dissection everything the textbook says, and how shall the student go about it without personal instruction? Who is to understand the mechanism of the deformity in ulnar paralysis who does not dissect with the utmost care the insertions and nerve supply of the short and long muscles of the fingers? And where is the time for all this in a course in anatomy crowded into the freshman year? How can it stay with a man who learns it in his freshman year, so that it may be readily available when he is a senior or an interne, or a hard-worked general practitioner? Where were your men weakest when they were called to the war? Wasn't it in their anatomy?

Among all the weaknesses of internes, where are they weakest if not in their anatomy? And it is just here that the young physician should be the strongest. Anatomy is no theoretical science, difficult to understand. All its salient facts may be seen and handled; hardly one of its details is such that it cannot be verified by personal observation. What, then, is the trouble? Is there lack of material? Concerted action in anatomical boards and sufficient money will overcome this. Is there difficulty in keeping cadavers on the tables long enough? It can be done if we will take the trouble. In spite of our warm, moist climate, I can keep bodies on the table eight months continuously, and they are as good to the minutest detail of dissection and even in staining properties for microscopic investigation, at the end of the eight months as the day they were put on the table. Lack of time is an important handicap. No man can teach anatomy in a concentrated course in the freshman year. Four-hour periods in the dissecting room day after day, where new facts are all the time appealing for storage room in young brains, are a means of courting early loss of overcrowded, ill-defined impressions. Short periods of intensive work, and frequent repetition, is the secret of permanent knowledge, and change of work keeps the mind fresh.

Is it possible that our teachers are at fault? The research enthusiast is not necessarily a good teacher. May not his very enthusiasm for research in embryology, or comparative anatomy, be a handicap? Can he dream of the next day's lesson and how to make it interesting to embryo doctors, and at the same time indulge in the dreams that materialize in a paper for the Society of Anatomists? Can he go fresh every day to an illuminating preliminary talk on the day's dissection if he is immersed nine-tenths of his time in the comparative morphology of the kidneys? Or is an inexperienced instructor, however enthusiastic, the best able to inspire lagging enthusiasm in the tired student? To my mind, the anatomical staff should consist of two types of men, born teachers and research fellows, the latter required only to give a few special lectures on elective courses, the former, men who cannot help the urge to inspire in students a desire for useful information.

What about topographical anatomy? In most schools this means sectional anatomy, and I believe sections of the formalin-hardened or frozen body are practically useless to the medical student. As a means of confirming or correcting relations learned by dissection, of course, they are invaluable. Did not Braune's sections and His's reconstructions of frozen sections, revolutionize our ideas of form and relations and correct endless dissecting errors?

But only exceptionally do we find surgeons or physicians going to sections to clear up their difficulties. Let the sophomore student, when he first opens the abdomen and before he disturbs the viscera, carefully, with the aid of printed instructions, investigate and chart on a life-sized outline corrected for his subject, his own personal observations of visceral topography. Then in the junior year, in a laboratory course on applied anatomy, let him supplement this by carefully directed palpation of abdominal organs, with a hand

introduced into an abdomen through a subumbilical incision just long enough to give his forearm free play. Thus he will learn more than he can by many carefully labeled outlines of cross or other sections, and do something toward training his touch until he has eyes in his finger tips.

Applied anatomy is in most schools an elective lecture course. Surely this is a great lost opportunity. As a lecture course it is very dry at best; even such a course as is given in Treve's little book is dry, not because it is not intensely interesting, but because there are so many things to remember and the opportunity to apply them is so far away.

On the other hand, as a laboratory course, applied anatomy is intensely interesting and affords a great opportunity for manual training and for impressing the student with the appeal of accurate anatomy to clinical problems. Here, also, is a chance to insist on sufficient anatomical review in the junior year to clear up the blazed trails of memory's pathways, trails getting indistinct by enforced disuse. Four hours' laboratory work weekly will be required during the junior year. This by preference; the exigencies of the roster have reduced my own course to two hours weekly in the first semester in the sophomore year in the applied anatomy of the extremeties, and two hours weekly throughout the junior year on the applied anatomy of the head, neck and trunk.

Note that I do not say surgical anatomy. I can thus emphasize many anatomical facts which appeal to physicians. We start out by outlining the organs with colored chalks, in accepted patterns, on thoracic and abdominal walls, thereafter scratching the outlines in for permanence, to be later verified by a hand inside the chest or abdomen. Then come typical incisions in limbs, chest and abdomen; exposure of vessels, nerves and long bones and of heart, superior mediastinum, lungs and liver, by small, carefully-planned windows or incisions. We make typical abdominal incisions and study them in their anatomical relations. Through these incisions we investigate by inspection and palpation, the appendix, intestines, urinary bladder, gall-bladder, stomach, etc., all as they must appeal to the physician and surgeon. But all this needs careful laboratory supervision. Ninety per cent of medical students are primarily butchers, not surgeons, hurried and inaccurate in their work and careless of their best opportunities. Yet all are to have care of human lives some day, and the raw material must be moulded into shape.

If general anatomy be full of interest and opportunities for training in its laboratory possibilities, surely there is a glorious opportunity for trained thinking in applied neurology. Twenty years ago the main study of nervous diseases was symptomatic only; today nine-tenths of ordinary nervous diseases are most interesting problems in applied anatomy and physiology.

The clinical pathological work of neurologists of the past twenty years, on the central nervous system, has become a book where the enthusiast in applied neurology may read the meaning of many of nature's experiments on man, clear and convincing, as laboratory experiments on dogs and monkeys, and with all the patient's intelligence to help the interpretation. An hour's lecture weekly on this subject in the junior year will help the student to think of nervous diseases in terms of anatomy and physiology; but he must be thoroughly familiarized with the nerve tracts and nuclei, as seen by the naked eye and by the microscope in his sophomore year.

All of which means that I think I have made good my claim for a curriculum that shall allow the student to absorb anatomy slowly, steadily and persistently in his freshman-sophomore years, fixing it and making it readily accessible in his junior year, and then if a reasonable amount of it does not become permanent, it will be the fault of his clinical teachers, who themselves are failing to teach in terms of anatomy, physiology and pathology.

THE RESPONSIBILITY OF THE PHYSICIAN FOR ACCURACY IN DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

BY

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During the past few years a new word has come into both the lay and professional mind relative to tuberculosis; that word is Responsibility. Twenty-five years ago little was expected of the physician. He could do anything or nothing; he could advise his patients to "go out west and rough it;" he could prescribe cherry pectoral, cod-liver oil or whiskey; he could with legal freedom and clear conscience give them generous quantities of opiates and in the meantime—wait for the patient to die. But autopsies and careful studies of the evolution of tuberculosis and its clinical manifestations, have given us knowledge, and Responsibility is

*Read before the North Texas Medical Association at Fort Worth, December 12, 1923.

based on knowledge and not on fears, wishes and ignorance.

There was a time when poor fracture work was the principal cause of bitter adverse criticism, and even suits in civil courts for damages against medical men, and I take it that is still a thing to be feared. But a new cause for the bitterest kind of criticism has appeared—a cause not involving an occasional patient with unsatisfactory fracture results, but large numbers of persons; that cause is late-stage diagnosis of pulmonary tuberculosis.

Nearly all tuberculous persons over twenty-five years of age learn, after the diagnosis has been made, that tuberculosis in the adult is a chronic disease, with periods of activity separated by periods of inactivity. After being told what is the matter with them they know by their feelings that they have been tuberculous before and often will volunteer a statement somewhat like this: "Doctor, now that I know what is the matter with me, I realize that I have had this disease off and on for ten or fifteen years." Dr. O. M. Gilbert, in a recent issue (Oct. 13, 1923) of *The Journal of the American Medical Association,* states that on looking over his records he finds that most of his cases could have been diagnosed four and a half to five years before they were diagnosed; and that is the experience common to most clinicians who deal extensively with the tuberculous.

What factors appear, then, to encourage or force earlier diagnosis of tuberculosis? Three are outstanding: First, the knowledge that the later the diagnosis is made the longer and more expensive will be the recovery, if recovery be possible—a late diagnosis may find the patient in his last illness, having in the meantime spread the disease widely, and he may die as a pauper and his family be reduced to a state of poverty, all because of a lack of early diagnosis; second, the fear of long continued criticism from the patient and his family because the clinician didn't really know what was the matter with the patient until the disease was far advanced, and third, the purely scientific reason, namely, the intellectual satisfaction of knowing that we are right.

As we become better informed the feeling of responsibility increases, and intellectual arrogance, and professional jealousy and commercialism decrease. It is not a sign of weakness in these days to admit that we don't know—at least a few things—and as a rule the more capable and scholarly the physician the less likely he is to have a cut-and-dried opinion ready to be aired on everything from soup to nuts.

Tuberculosis work is difficult. It is easy only to him who thinks of tuberculosis in terms of late-stage consumption, "with garms in the spittle," as some of the lay people say. Clive Riviere tells us in his admirable book on "The Early Diagnosis of Tubercle," "The skill required for the early diagnosis of tubercle is, unfortunately, difficult and laborious to acquire and no short cut to it does, or even can exist—the path of experience must be duly trod." The question arises then, How shall we start and how proceed most effectively along the path of experience?

This is not the time nor the place to present argument for a department of tuberculosis, manned by tuberculosis specialists in all undergraduate medical schools. We can now only deplore the fact that even today most of the undergraduates are not started right, although there has been much improvement since most of us were undergraduates. The thing of immediate importance is the progress of those who are graduate physicians, dealing with the physical and mental ills of the public.

It matters not what kind of work we do in medicine, none of us can escape the responsibility of not knowing enough about tuberculosis to suspect it in a person regardless of what else may or may not be the matter with him. It appears, then, that the first thing to be taught in undergraduate days and to study continuously throughout the years of our professional lives, is the grouping of evidence in early tuberculosis. Sir James MacKenzie tells us over and over that we must know the symptoms of disease—that we should be able to tell what is the matter with the patient by hearing him, the patient, describe his sensations. Nearly all tuberculous persons if properly questioned describe themselves as tuberculous with almost as much accuracy as one with angina pectoris describes his disease, although the story is not so dramatic.

To get this story quickly and completely, all chest examinations should be made with and recorded on, a printed diagnostic form or card. The subject is too serious and the results of error too terrible to be considered in careless or incomplete manner. One has but to pause a moment and see the sickness, sorrow, death and poverty, of the tuberculous and their families that results from our not knowing, or not knowing in time. The history and examination being finished, the card of a tuberculous person will usually show three things, namely, subjective symptoms indicat-

ing active tuberculosis; a history indicating active tuberculosis, both past and present, and physical and other findings indicating active tuberculosis, also past and present.

Three subjective symptoms stand out plainly in nearly all cases of early tuberculosis. These symptoms are, in order, asthenia, nervousness and digestive disturbances. *Asthenia is the earliest, the most constant and the most useful symptom in suspecting and diagnosing active pulmonary tuberculosis.* When looked for carefully it will be found to be practically constant. Also, two of these symptoms, asthenia and nervousness or asthenia and digestive disturbance, will be found in nearly every case. It might profitably be said at this time that more men and women are started toward tuberculous graves with a bottle of I. Q. & S., or some other so-called "tonic" in their pockets, than from any other diagnostic and therapeutic evil the medical profession is guilty of at this time. If all physicians knew the importance of these three symptoms in tuberculosis, we would have much less late-stage diagnosis of consumption.

The details of history taking, physical examination and the interpretation of the various signs and symptoms of tuberculosis, can be learned best in a clinic. A clinician can teach or demonstrate a thing in five minutes that has taken him years of time and the examination of thousands of patients, to learn. Tuberculosis workers should be good teachers, although some are not. Their clinics should be open to their colleagues, and they should teach over and over the simple, useful things that wide clinical experience and reading have given them.

In the absence of a tuberculosis clinic and an abundance of recent literature on the subject, I know of nothing so useful to the clinician as to read his cases over backward—not once but a dozen times; not one case but dozens of cases. He will then begin to see the evolution of tuberculosis and to recognize its earlier manifestations.

In conclusion, it appears that the first step "along the path of experience," as Riviere calls it, which we are to travel is the recognition of our responsibility in relation to this disease; the second is that we become well informed and mentally alert regarding evidences of early tuberculosis, so that we can take a hint and then proceed along the right lines to gain all the information possible in the individual case, in order to make an *accurate diagnosis at the right time.*

MISCELLANEOUS

A CORRECTION.

On page 260 of the August number of the JOURNAL, Dr. J. M. Boyd was accused of residing in Palacios. That city might well be proud to claim the distinction of numbering such an interesting family among its citizenry, but Pasadena will not allow that honor to be taken away from her. Dr. Boyd lives and practices at Pasadena, ten miles southeast of Houston.

REMOVAL OF ADHESIVE BANDAGE.

Medicated tape or adhesive bandage can readily and painlessly be removed from the patient by moistening the bandage with a little pure ethyl acetate held in absorbent cotton, by sopping lightly over the entire surface of the bandage or tape. In a few seconds the adhesive surface is killed and the bandage can be pulled free from the skin or hairy surface without the least "pull" to the patient. The ethyl acetate possesses a rather penetrating odor, but, because of its high vapor pressure, it evaporates entirely in a few minutes, leaving neither odor nor ill effect.

When the adhesive tape or bandage covers an area or surface which may become infected, a few drops of tincture of iodin or a few crystals of pure iodin may be added to the ethyl acetate (the latter is an excellent solvent for iodin) for purposes of disinfection. The solution may then be used as before for the removal of the bandage.—H. F. ZOLLER, *Journal A. M. A.*

BLUE SKY HEALTH PROPAGANDA.

Blue sky health propaganda, as defined by Frederick D. Stricker, Portland Ore. (*Journal A. M. A.*, Oct. 6, 1923) consists of beautiful promises of health and happiness without due provision being made for their efficient and practical realization. As a result of scientific research there is an abundance of accumulated knowledge which is available for the education of public opinion in personal hygiene. The average physician does not seem interested in public health sufficiently to discuss it intelligently. Some even go so far as to say that they are not health policemen. Others are openly antagonistic to public health work. The far-sighted policy of preventing possible distress has not received the attention it should from our present civilization. Physicians do not seem to realize the service they owe to the community. The teaching of health in medical schools is almost everywhere a farce. Prevention is greater than cure, and this is apparent to all except the physician who insists on being a mender of broken down machinery instead of a builder of health. There can be no denying of the fact that many physicians consider public health work little more than "blue sky." Health examinations are not given serious consideration, and efforts are not being made to interest the apparently healthy individual in his own welfare. As long as the physicians maintain this attitude, the practice of medicine will always be open to adverse criticism, and the gates will be open for the cults to flourish. Every cult, quack, faker and nostrum dealer professes to cure disease, but it always remains for the timely scientist to devote, and even sacrifice, his life to develop methods for preventing disease. The prevention of disease marks the truly scientific physician, and when he loses sight of this important service, he allows his profession to degenerate to the plane of the mercenary healer. The opportunity has been grasped by the irresponsible practitioners of healing whose sole interest it is to evade the rigid qualifications required by law for the practice of medicine. In order to

cover up their real incentive, they have capitalized the shortcomings of the medical profession, and every plausible form of treatment has been used to justify their evasion of the law. A careful investigation discloses the fact that none of these so-called systems have been able to demonstrate scientifically the truth of their contention. But these irresponsible practitioners have found this to be an easy and lucrative way of making a living. In order to protect their questionable practices, they are substantial monthly contributors to organizations whose main purpose it is to intimidate legislators to legalize these so-called systems, and finance publicity bureaus for the distribution of misleading information. Thousands of lives are being sacrificed annually on the altar of ignorance that might have been saved by the timely application of the principles of preventive medicine. An intensive campaign of education is necessary to protect trusting humanity, and prevent it from exchanging its investment in all that science affords in protecting its most valuable asset, health, for the blue sky promises of health and happiness of the fanatic or designing disciples of unproved theories.

UROLOGY IN WOMEN.

William E. Stevens, San Francisco (*Journal A. M. A.*, Dec. 8, 1923), deprecates the tendency shown in many parts of the country to separate urology in women from urology in general, and place it in the hands of the gynecologist and obstetrician. In a study of 200 nonpregnant women with urinary disturbances, he found that the symptoms were entirely due to urinary tract conditions in 73 per cent., whereas lesions of the generative organs, although present in a large proportion of cases, were possible etiologic factors in only 27 per cent. Therefore, pathologic conditions of the urinary tract in women should be treated by the urologist. Stevens discusses particularly strictures of the female urethra. They are not uncommon, and they are often responsible for marked functional and organic disturbances in the genito-urinary tract of this sex. Ureteral strictures, he says, are not as common as many believe. Stevens makes it a practice to calibrate the ureters with wax bulbed catheters and, in addition, in many instances, to obtain pyelouretrograms in patients complaining of symptoms of pyelitis or other pathologic conditions referable to the urinary tract for which no cause could be found in the lower urinary tract, or in patients who did not improve rapidly under treatment. As a result of thirty-seven calibrations, he found ureteral strictures in eleven, or 29.7 per cent. In 2,528 clinic patients admitted to the obstetric department of Stanford University Medical School, a diagnosis of pyelitis was made in thirty-one, or 1.22 per cent. In 1,114 obstetric cases in the Stanford wards of the San Francisco County Hospital, pyelitis was found during pregnancy in eight, or 0.7 per cent. From the series of 3,642 cases, it will be seen that pyelitis occurred during pregnancy in thirty-nine cases, or a little less than 1 per cent. Tuberculosis of the kidney during pregnancy is comparatively uncommon. No tuberculous infections of the kidney were observed during pregnancies in the 2,528 cases in the obstetric department of Stanford University Medical School. Stevens believes, however, that this condition is often overlooked because of the frequency with which urinary disturbances occur during this period, and the failure to make a thorough urologic examination. Stevens is not in accord with those who believe that ureteral catheterization and pelvic lavage are not practical in infants and young children. Gentleness is, of course, essential, and he sounds a warning at this time in connection with ureteral catheterization in such cases. He cites four cases. One patient was only 10 months old; the second was 13 months old. In this case improvement began almost immediately after the first cystoscopy. The baby gained in weight and was clinically cured after the fifth cystoscopy. In the third case, referred because of painful defecation of three weeks' duration and painful urination, hematuria and cloudy urine of three days' duration, a small, bloody mass was found in the urine which contained a tangle of wool fibers. The mother explained its presence by the fact that the child had been "riding horseback" on the arm of a chair. Cystoscopy showed a normal bladder. The fourth patient was 8 years old. On examination, a stricture was found at the external urethral meatus and another at the right ureteropelvic junction. Pyelography revealed a marked degree of hydronephrosis and hydroureter on the right side. The roentgen-ray catheter formed a loop in the lower third of the enormously dilated ureter before it proceeded upward to the kidney pelvis. Fortunately, the left kidney and ureter were normal, and, following the removal of the hydronephrotic kidney, the child made an excellent recovery.

THE FUNCTION AND PROPER FIELD OF ACTIVITY OF THE PUBLIC HEALTH OFFICER.

In promoting the betterment of public health, Leverett D. Bristol, Olean, N. Y. (*Journal A. M. A.*, Nov. 24, 1923), says the private practitioner and the public health official must co-operate to bring about desired results. While special functions and fields of activities of health officers and private practitioners may differ, their objects and aims are the same—to promote positive health for all members of society and to relieve the more unfortunate persons of disease and suffering. The local board of health is the oldest and the most responsible public health unit. As its chosen executive officer, the local health officer should be the public health leader and educator of his community. In those states having laws permitting the employment of county health officers or general district health officers for counties, such health officers possess all the powers and duties conferred on local health officers within their particular jurisdictions. There are two forms of state health organizations, one in which the power and authority is vested in a state board of health, consisting of several part-time officials, which employs a secretary or executive officer usually on a full-time basis. Some of the more progressive states have reorganized state health work in such a way that the chief power is vested in a commissioner who has the assistance of an advisory council. The outstanding need in entire future health programs is that which has to do with rural public health and sanitation, and its adequate development throughout the state. In general, it may be said that while there has been a gradual decline in the death rate in the cities, the death rate in country communities has remained fairly stationary. In addition to carrying on educational work, state health authorities may have other important functions and fields of activity, such as: (1) investigation and research of various kinds; (2) epidemiologic and laboratory diagnostic service; (3) standardization of methods and forms; (4) fixing of professional standards for the qualifications of health officers; (5) supervision of schools or courses of instruction for health officers; (6) popular publicity work; (7) the control of communicable diseases or nuisances affecting more than one community or district; (8) the recording of vital statistics; (9) the inspection and control of foods and drugs; (10) the examination and control of public water supplies and sewage disposal plants; (11) supervision over the manufacture of antitoxins and vaccines; (12) supervision over hospitals and

sanatoriums for tuberculosis; (13) supervision over maternity, infancy and child hygiene work, and (14) supervision over public health nursing service.

The most essential requirement for the ultimate success of public health administration, local, state and federal, is a sympathetic co-operation between the private practitioners of medicine and surgery and the public health authorities. The private practitioner of medicine is potentially the most important unit in public health work. If the private practitioner has failed in the past to take his proper place and to assume his true function in preventive medicine, it is because of the fact that he has thought too much of his individual rights and prerogatives and too little of his obligations and responsibilities to the public. His chief obligations are: 1. Legal obligations, including: (a) The prompt and accurate reporting of births, (b) The prompt and accurate reporting of deaths, (c) The prompt and accurate reporting of all diseases required to be reported. 2. Professional or moral obligations, including: (a) Early and accurate diagnosis, (b) Prompt and efficient treatment, (c) Education of his patient as to the patient's future needs, and as to the patient's own relation to the health of the community, (d) Co-operation with the constituted health authorities. What is needed is not "state medicine," but organized medicine; medicine which is organized in such a way that while it remains largely in the hands of private practitioners, it will reach rich and poor, city folk and country folk, children and adults, not only after disease has gained a foothold, but before disease has become apparent, and while the individual is yet well and strong. The practitioner of the future must work and think more in terms of physiology and less in terms of pathology. In the medical schools of the past and present, the departments of pathology have been and still are the outstanding and most popular departments, while those of preventive medicine have had to fight for existence. In the medical schools of the future, the department of pathology must naturally fade into insignificance compared to the growing departments of physiology, hygiene and preventive medicine. Let the curriculum makers give less time to the "dead house" and cirrhotic livers and more time to the houses of the living and the principles of hygiene.

MENINGO-ENCEPHALITIC LESIONS AND PROTOZOAN-LIKE PARASITES.

Meningo-encephalitic lesions and protozoan-like parasites have been found by E. V. Cowdry and F. M. Nicholson, New York (*Journal A. M. A.*, Feb. 16, 1924), in the brains of apparently normal laboratory animals commonly employed for experimentation. The lesions in question are not confined to rabbits but occur also in mice which likewise show every appearance of being healthy. They were of the characteristic meningeal, perivascular, focal and subependymal types. Lymphocytes predominated, and polymorphonuclear leukocytes were of rare occurrence. Protozoan-like parasites were found in the brains of mice which exhibited lesions. In shape, they resembled straight or slightly curved rods. Measured in stained preparations after Zenkar fixation, they were, on an average, from 1.8 to 2 microns in length and from 0.5 to 0.8 micron in diameter. Both ends were bluntly and uniformly rounded. Very rarely were pear-shaped parasites seen, or forms with pointed ends. They stained blue by Giemsa's method, pink with eosin, intensely red with fuchsin, and were somewhat resistant to decolorization by Gram's method. They exhibited marked internal organization in the possession of a well defined mass of material that stained intensely by both acid and basic dyes. Usually, this was spherical, and was located at a point distant from one extremity by about one-third of the total length of the parasite. Occasionally, this nuclear-like mass was divided into two parts one situated at each end. Sometimes approximately one-half of the length of the parasite was stained strongly, the other half very lightly. In all cases a fairly definite membrane limited its protoplasmic contents. The parasites were seen free and within the macrophages in areas of infiltration, as well as in very characteristic cysts, which, in addition to being associated with the infiltrations, were found in other parts of the brain, which showed no reaction to their presence. Other observers have termed this organism, *Encephalitozoon cuniculi.*

THE USE OF CONVALESCENT SERUM IN THE PROPHYLAXIS OF MEASLES.

In 396 cases of measles at the Durand Hospital during ten years there were eighteen deaths, or a rate of 4.5 per cent. Bronchopneumonia was the fatal complication in sixteen of these, and associated diphtheria in the other two. There was only one death among children over 5 years of age, this occurring in a boy, aged 7 years, who had a complicating neglected diphtheria. During the spring and summer of 1923, measles convalescent serum was collected for trial as a prophylactic measure. Exposed children who had not had measles were given serum. In all, sixty-three children were observed by George H. Weaver and T. T. Crooks, Chicago (*Journal A. M. A.*, Jan. 19, 1924). Of these, four had had measles and two were under 2 months old; these were not given serum and did not develop measles. There were fifty-seven susceptible children; nine of these were not given serum, and they all developed measles from twelve to fifteen days after exposure. Forty-eight were given serum; forty-four did not develop measles, although they were kept with the others and were similarly exposed. Four of those given serum developed measles. In three of these the rash appeared from one to six days after the serum injection. In one the rash came out fifteen days after the administration of the serum on the day of exposure. The main use of the serum seems to be limited to prophylaxis against measles when given within the first week of exposure. This protection is apparently a passive immunity, and its duration is limited.

THE ETIOLOGY OF SCARLET FEVER.

In a series of 100 cases of scarlet fever studied by George F. Dick and Gladys Henry Dick, Chicago (*Journal A. M. A.*, Jan. 26, 1924), in 1922 and 1923, hemolytic streptococci were found in all; 16 per cent. of these strains fermented mannite, and 84 per cent. did not ferment mannite. In 1923, the authors reported experimental scarlet fever produced with one of the strains that fermented mannite. This strain was isolated from a case of scarlet fever. It produced experimental scarlet fever. It was isolated from the experimental disease, and again grown in pure culture. All of Koch's laws were thus fulfilled except that one which requires that the organism be constantly present in the disease. In order to meet this requirement, it was necessary to learn whether or not experimental scarlet fever could be produced with a strain of hemolytic streptococcus that did not ferment mannite. Two volunteers were chosen. One showed an entirely negative skin test with the filtrate of the streptococcus previously used. The other showed a positive skin test. A hemolytic streptococcus that did not ferment mannite was isolated from the throat of a scarlet fever patient. Part of a forty-eight hour culture of this organism was swabbed on the tonsils of each volunteer. The volunteer who showed a negative skin test remained well. She had no sore throat, no fever and no rash. The volunteer who showed a positive skin

test developed scarlet fever. Since the streptococci used in these experiments have fulfilled all the requirements of Koch's laws, the authors assert that it may be concluded that they cause scarlet fever.

ELECTRONIC REACTIONS OF ABRAMS DO NOT EXIST.

The revolutionary Abrams technique for the diagnosis and treatment of disease, which has swept the country, is utterly without foundation in science.

Such is the verdict of the Scientific American Abrams Investigation Committee, which for nearly a year has subjected the so-called electronic reactions of Abrams to a searching analysis. The practitioners of the Abrams method have declared it holds out a new hope for suffering humanity. Its enemies have dubbed it the greatest piece of charlatanism in history. The movement has spread to all parts of the world and threatened to upset the entire theory of the medical profession.

There have been forty-four different variations of the Abrams apparatus in this country alone. The Abrams method has had 3,500 practitioners; the other methods have each had a thousand more. The number of patients has run into hundreds of thousands.

"The so-called electronic reactions of Abrams do not exist—at least objectively," declares the committee. "They are merely products of the Abrams practitioners' minds. These so-called reactions are without diagnostic value. And the Abrams oscilloclast, intended to restore the proper electronic conditions in the diseased or ailing body, is barren of real therapeutic value. The entire Abrams electronic technique is not worthy of serious attention in any of its numerous variations. At best, it is all an illusion. At worst, it is a colossal fraud.

"This electronic development has caused a sad state of affairs in this world of ours. It has given rise to all sorts of occultism in medicine. It has been a renaissance of the black magic of medieval times. It has given free reign to idiotic ideas—ideas which would formerly have been laughed out of existence at their very start. Suffering humanity has been made so many lavish promises of late that it is a sad disillusion now to go back to our conservative orthodox medicine, which, after all, remains our mainstay.

"When the day arrives for the practical application of such serious research work, we may be certain that it will have nothing in common with the passing electronic craze. In so far as concerns the apparatus employed, the methods of exploitation, or the qualifications of the men engaged in the work, it will be wholly without resemblance to the cults whose basic ideas and whose technique this committee denounces."

Dr. Abrams died suddenly of pneumonia on January 13, in the midst of the *Scientific American* investigation. His death came on the eve of his scheduled appearance as the star witness in the trial of Dr. Mary Lecoque, an E. R. A. practitioner, at Jonesboro, Ark., charged with using the mails to defraud.

SOMEBODY TELL HIM.

The following letter, which is reproduced *verbatim et literatum*, as nearly as possible, was addressed to the State Board of Health but referred to the State Board of Medical Examiners. It is desired that the gentleman making the inquiry be accommodated. He has asked that the State Board of Health write him a letter telling him what he knows about medicine. It was thought that perhaps the State Board of Medical Examiners could do that, but it seems that more help is required, and the problem is referred to our readers. Perhaps we could tell the gentleman how much he does not know. The letter follows:

"This is from Dr. ———, 110/2 West California Ave. Oklahoma City Oklahoma.

"Dear Sirs and Friends I would like for you to write me a letter telling me what I know about Medicin I am trying to get a permit here to make my medicins and it would be a thing of pleasure for you to write me what I know about Medicin.

"I Have been in OKLAHOMA Twelve months and I am AS DESERVING MANS THEY HAVE GOT IN OKLAHOMA. I WILL GIVE YOU A 10000.%9;94$ 83 697 28;; 33 dollars if you will ever find where I was ever arested in Texas.

"Now I paid one fine in bowie texas in 1919 I THINK IT WAS IN SQUARE I DONT REMEMBER HIS NAME BUT HE IS DEAD NOW his son was mayor of the town for two terms. AND JUSTCE OF THE PEACE. WAS I CANNOT THINK OF HIS NAME I KNEW HIS NAME AS WELL AS I KNEW MY OWN NAME. OR JUST ABOUT AS WEL I dont know what makes me forget names that way i never forget a face that I EVER Knew.

"Now I make ACifilectic and Rheunatic cure that is guarranteed by the maker to cure any case of rheumatism that they have in OKLAHOMA OR ANYwhere else and a blood poisinc cure that will cure any case of blood poisin that is any where in any of the states and A GONORRHEA Cure that is as efectualas any medicin on earth it will cure it right now if you will use the remedy at the right time.

"Now I am Dr. ——, 1101/2 West california Ave. Oklahoma City. Oklahoma.

WHY DOCTORS ARE LEAVING COUNTRY DISTRICTS.

The following letter from Dr. Alex W. Acheson of Denison, is published for the consideration of those of our readers interested in the economics of medicine. Dr. Acheson has been practicing medicine long enough to make pertinent observations. He was practicing medicine before 75 per cent of our readers were born, in all probability. We will not say more than that, for fear that we will disclose his age. The letter follows:

"Practitioners are being advertised for in some of the New England sections. This has drawn attention to their scarcity in the rural districts elsewhere. Explanations have been offered in the form of improved educational advantages for the growing family, ease of auto travel, lure of society and the movies, yet the explanation fails to explain.

"The good roads and the auto have brought the schools and movies close enough for enjoyment. His family can slip into town after supper, and back before bedtime. He is surrounded by as good, if not better society at home than in town. It is a serious matter to drop a lucrative practice in the country, while trying to establish a new one in town, the reasons for which have all been aimed at superior conditions offered, and none at the annoyances of a country life.

"The rural population are as much interested in keeping their physicians as the physicians themselves could be. While a few old physicians would naturally desire to move to town, there are enough young ones graduating to take their places, so that there should be no dearth. But there is a shortage, and one where the opportunities for success are unsurpassed. There is no better field in the world for a beginning doctor than in the country, where the people are cordial, reliable in their payments, and the outdoor life of the children exhilarating.

"In explanation of the desire to move to the city, let us look at one of the annoyances. Recollect that the country doctor is surrounded by the substantial people of the land; no extremes of vice, poverty or crime. His patrons are all reliable, their word being as good as their bond.

"In this surrounding he gets a notice from the government to furnish a sworn statement of the quantity of morphine he has on hand, and apply for a renewal of his license to practice medicine, together with a remittance of three dollars. As he does not carry an extensive stock of medicine, it is an easy matter to write down his list of morphine tablets. But he has to swear to it. He, who trusts the whole neighborhood ain't to be trusted by his government with a simple statement. He must make oath to it. It is ten miles to the nearest Notary.

"He must also send a money order or bank exchange, as it is too risky to trust money in the letter, while the government will not accept his personal check. His check—the check of the man who trusts the whole country, will not be accepted. The nearest bank is twenty miles away, and the nearest money order office fifteen. He concludes to risk the nearest, as soon as he can catch a gap in his work, that will permit him to escape.

"He has several important cases on hand that are difficult to get away from, while he has been warned to look out for some expected work at most any moment. Granny Ketchem is already at the house. He reaches a crevice in his work, where he thinks he can dodge off, and starts for the money order office. He gets his order, but to his chagrin the only Notary in the town has gone on a fishing trip for two days. There is no recourse but a second trip. Why did he not go on to the bank town, twenty miles from his home? Because that town was on the other side of the county. He was now forty miles from it.

"In the meantime he misses one of the expected summons, which knocks his eye out for twenty-five dollars. Is it any wonder that the country doctor is disgruntled? Is it surprising that he becomes dissatisfied? He has gotten behind with his work, trying to catch up with the government, helping the reformers control a class that don't exist in his community, at the same time that he lost the work for a man to whom he owed the twenty-five dollars.

"Multiply this experience by about thirty thousand to get the full effect of the enforcement of the narcotic law. In the old flint-lock musket the touch-hole was placed about midway of the powder charge, so that the gun kicked backwards at the same time that the ball went forwards. The idea was, that during a battle, the soldier firing the musket would not distinguish the noise of his own gun, and there must be a rebound that could be felt.

The rebound from the narcotic law is knocking the doctor out of country districts. What benefit it is to the vice districts of the city I am unable to judge, except from the reports published, that the quantity of opium imported is three times as great as before the law was enacted.

"Hadn't we better get back to the good old times when the country trusted the honesty of the medical man, instead of classing him as a suspicious character, and requiring him to take out a license to carry on his business, just as the government used to do with the saloon keeper?"

GLOVER'S MANGE CURE FOR DISEASES OF THE SCALP OR LOSS OF HAIR.

Murray P. Whichard, Edenton, N. C. (*Journal A. M. A.*, Aug. 2, 1924), reports of a case of severe reaction from the use of this preparation. The purchaser used the preparation according to directions, applying it to the scalp and rubbing it in thoroughly. Then, wrapping a turkish towel about the head, she slept for a couple of hours. When she awoke, a dead feeling was present in the scalp and neck; this feeling extended to the ears, which, in addition, were badly swollen and congested. She washed her head at once with soap and water without any apparent relief. Repeated washing failed to give results. Dr. Whichard found the patient in a rather serious condition; her entire scalp was badly swollen and thickened; the right eye was closed because of congestion of the tissues, and both ears were so badly thickened and swollen that they looked as if they would break if roughly handled. A number of blisters also had been produced by the powerful irritant. Dr. Whichard expresses the opinion that, if the patient had continued to use this product according to directions, she would have had neither hair nor scalp left.

THE THERAPEUTIC STATUS OF CAMPHOR-IN-OIL.

Ignorance, inertia and error are foremost among the factors that militate against effective therapy at a time when therapeutic nihilism has gained a strong hold on many thoughtful physicians. Almost equally detrimental is the misplaced confidence that tradition or propaganda often engenders for certain drugs. Unwarranted hopes for pharmacologic potency not only lead to failure where a patient expects success, but also delay the opportunity to try something likely to be more efficacious; and thus sometimes the most favorable moment has passed. These considerations are prompted by the recent report of Marvin and Soifer[1] regarding the use of camphor-in-oil as a cardiac stimulant. Although the drug has received slight recognition in academic pharmacology, and at best an unenthusiastic reference in Useful Drugs, it is still employed widely in circulatory emergencies. When competent clinicians study its action in such cardiac stress as congestive heart failure and fail to secure evidence of any action on heart rate, respiration, blood pressure, vital capacity, or the general clinical condition in which digitalis is frequently promptly effective, there is surely justification for comment. Henceforth the burden of proof that camphor-in-oil has a rational place in the treatment of congestive heart failure rests with its advocates. All others may well hesitate to put their trust in a drug that seems to have given more promises than therapeutic performances.—*Jour. A. M. A.*, Aug. 2, 1924.

A NEW METHOD FOR THE REMOVAL OF FOREIGN BODIES IN THE EXTERNAL AUDITORY CANAL.

A mother recently brought her daughter, aged 9, to me for the removal of a cherry seed in the right ear canal, which had been there for ten months.

Various attempts at removal during this time had failed, and the youngster was quite sensitive with regard to any manipulation about the ear. A smooth, round, large cherry pit could be seen, which entirely filled the auditory canal, and was movable, but stayed close to the drum. Sudden movement of the head produced dizziness and a slight nausea, but no nystagmus.

The mother's description of previous unsuccessful attempts to remove this foregn body induced me to try a new method. I dipped a camel's hair brush in liquid glue and held it firmly against the cherry pit for a minute or two. Apparently, the warmth of the

1. Marvin, H. M., and Soifer, J. D.: The Value of Camphor-in-Oil as a Cardiac Stimulant, J. A. M. A., 83:94 (July 12), 1924.

ear canal prevented the glue from setting, as there was no cohesion whatever.

Next I tried furniture glue, with the same results. I left not only the cherry pit behind, but also a considerable amount of glue, which was removed with difficulty.

Owing to the fact that the cherry pit had a hard, dry surface, I decided to try dental cement. This had the advantage of setting very rapidly, and it did not adhere to the surrounding tissues.

The cement was mixed in the usual manner, and, when fairly thick, the camel's hair brush containing a small lump of the cement was inserted into the ear canal and held firmly against the cherry pit. This was held quietly for a couple of minutes, and withdrawn.

It was surprising how firmly the cement held to the seed as it passed through the external auditory meatus. There was no pain, and, aside from a red, inflamed drum, which condition rapidly cleared up, there was no further ear disturbance.

The advantages of a quick-setting cement are obvious; there is less trouble in holding the child still, as it sets quickly and does not cause any trouble if pieces break off in the ear canal.

Small pebbles, glass beads, or any hard substance which completely fills the auditory canal and impedes the passage of a small instrument beyond it, can be removed easily by this method.—Dr. O. J. Dixon, M. D., in *Jour. A. M. A.*, August 2, 1924.

MEDICINAL REMEDIES

TRUTH ABOUT MEDICINES—NEW AND NON-OFFICIAL REMEDIES.

Benzyl Fumarate-Abbott. Benzylis Fumaras.—It contains not less than 99 per cent of benzyl fumarate. Benzyl fumarate acts like benzyl benzoate and benzyl succinate in lowering the tone of unstriped muscle. Like benzyl succinate, it has the advantage over benzyl benzoate in that, because of its insolubility in water, it is practically tasteless and does not produce gastric disturbance. It is employed in the same conditions as benzyl benzoate and benzyl succinate (see New and Nonofficial Remedies, 1924, pp. 69 and 71). The Abbott Laboratories, Chicago.

Mead's Cod Liver Oil.—It has a vitamin potency so that one-fourth of one per cent cures experimental rickets in rats in five days when added to the diet. For a discussion of the actions and uses of cod liver oil, see Useful Drugs, sixth edition. Mead Johnson & Co., Evansville, Ind.—*Jour. A. M. A.*, July 12, 1924.

Oleo-Bi (Roche).—A suspension of finely divided bismuth oleate in olive oil, containing bismuth oleate equivalent to 0.05 Gm. of bismuth (Bi) in each Cc. Oleo-Bi (Roche) is proposed as a means of obtaining the systemic effects of bismuth in the treatment of syphilis (see Bismuth Compounds, New and Nonofficial Remedies, 1924, p. 74.) Two cc. are administered intramuscularly, preferably into the gluteal muscle, two or three times a week. Oleo-Bi (Roche) is marketed in the form of 2 Cc. ampules. The Hoffmann-LaRoche Chemical Works, New York. —*Jour. A. M. A.*, July 19, 1924.

Butyn Ointment-M. E. S. Co.—Composed of butyn (see New and Nonofficial Remedies, 1924, p. 32) 1 per cent, water 1 per cent, wool fat and petrolatum 98 per cent. The ointment is put up in collapsible tubes for application to the eye. Manhattan Eye Salve Co., Louisville, Ky.—*Jour. A. M. A.*, July 26, 1924.

Anterior Pituitary Tablets-Armour, 2 Grains.—Each tablet contains desiccated pituitary substance (anterior lobe)—Armour (see New and Nonofficial Remedies, 1924, p. 226), 2 grains. Armour and Company, Chicago.

Pituitary Tablets-Armour, 2 Grains.—Each tablet contains desiccated pituitary body—Armour (see New and Nonofficial Remedies, 1924, p. 226), 2 grains. Armour and Company, Chicago.

Cod-liver Oil-Squibb has a content of fat soluble vitamin-A which is more than one hundred times that of best quality butter. For a discussion of the actions and uses of cod-liver oil, see Useful Drugs. The average dose is 15 Cc. E. R. Squibb and Sons, New York.—*Jour. A. M. A.*, April 5, 1924.

PROPAGANDA FOR REFORM.

Atussin, Peptoproteasi, Paraganglina Vassale, Fosfoplasmina, Asmoganglina and Endo-Ovarina Tablets Not Accepted for N. N. R.—These products are manufactured in Italy and sold in the United States by the Neother Products Co., New York. Atussin is claimed to be a suprarenal preparation; Peptoproteasi, a gastric ferment preparation; Paraganglina Vassale, a suprarenal product; Fosfoplasmina, an egg yolk extract; Asmonganglina, an extract of the suprarenal and hypophysis, and Endo-Ovarina Tablets, an ovary preparation. In each case the statements made in regard to composition were indefinite and the therapeutic claims unwarranted. The booklet which the Neother Products Co. uses as advertising for these products consists of 151 pages, presents a jumble of fact and fancy, and reads more like a patent medicine almanac than a scientific treatise. The Council on Pharmacy and Chemistry found Atussin, Peptoproteasi, Paraganglina Vassale, Fosfoplasmina, Asmoganglina and Endo-Ovarina Tablets unacceptable because (1) their composition is indefinite or semisecret, (2) the therapeutic claims are unwarranted and (3) their recognition would be the means of advertising proprietary products which are not accepted.—*Jour. A. M. A.*, June 21, 1924.

Dose of Thyroid for Children.—Thyroid effects are generally obtained by the administration of Dried Thyroid U. S. P. (Thyroid Sissum). There is, however, no fixed dose of thyroid for children. The amount of dried thyroid to be administered must be determined in each case. A safe initial dose for a child three years of age would probably be 0.015 Gm. of dried thyroids two or three times a day. The best way is to start with a small dose and to gradually increase it until either satisfactory improvement or symptoms of intolerance manifest themselves. As soon as the desired effects are obtained or symptoms of intolerance manifest themselves, the dosage must be reduced.—*Jour. A. M. A.*, June 21, 1924.

Therapeutic Lamps.—The Kromayer water-cooled mercury-quartz light and the Burdick and Hanovia mercury-quartz lights are considered sources of ultraviolet radiation of strong intensity, emitting a large quantity of long and short, ultraviolet wave lengths. In contrast to this carbon arc lamps, of which the ultra-sun lamp is an example, are used more particularly for the rays present similar to those in the spectrum of sunlight, namely, the invisible heat rays, the visible rays and the longer ultraviolet rays. The nonburning feature of the ultra-sun lamp is due to the practical absence or very weak intensity of the short ultraviolet rays which are the wave lengths that irritate and easily produce erythema. The advertisers of the ultra-sun lamp stress the fact that the spectrum of their lamp is a continuous one, whereas the spectrum of the mercury-quartz light has gaps. No one has yet proved, however, that the presence of gaps in a spectrum is a drawback in the clinical use of that light. Furthermore, no one has proved that the burning or erythema-producing rays of the mercury-quartz

lights are disadvantageous. It cannot be said that the carbo arc lamp is less valuable than the mercury quartz lamp for certain diseases. The exact indications for the different sources of light have not been worked out.—*Jour. A. M. A.*, June 28, 1924.

Purifico, a Cancer Cure Fraud.—In 1917 the persons doing business as the Purifico Company pleaded guilty to the charge of the federal authorities that the claim that Purifico was an effective remedy for cancer and other conditions was false and fraudulent. Now a fraud order has been issued against the Purifico Company denying the firm the use of the mails. Analysis showed "Purifico No. 1" to be a watery, alcoholic, sugar mixture of cinchona, plant extractives, a vegetable laxative and potassium iodid. "Purifico No. 2" was a watery, alcoholic mixture of cinchona, plant extractives and potassium iodid. "Purifico No. 3" was a watery, alcoholic, sugar mixture of plant extractives, including valerian.—*Jour. A. M. A.*, July 5, 1924.

"Cuprase—Chemical Colloidal Copper."—In 1919 the Council on Pharmacy and Chemistry reported on Cuprase, marketed by the Anglo-French Drug Co. It stated that the claims made for this preparation are those commonly made for "cancer 'cures,'" and held that these could not be too strongly condemned. The Council contrasted the loose statement of the Cuprase advertising with the results reported by Richard Weil, who was unable to find that colloidal copper had any therapeutic value. The Council declared the claims made for Cuprase extravagant and cruelly misleading.—*Jour. A. M. A.*, July 5, 1924.

"Sero" Endocrine Preparations.—A circular "For Endocrine Therapy" bears the name of R. A. White, Los Angeles, and Cal. Endocrine Foundation Laboratories, Long Beach. It advertises "Asthma Sero," "Antitoxoid in Tuberculosis," "Rheumatism Sero," "Nephro Sero,' "Pneumonia Sero," "Abscess Sero," "Tabes Sero" and "Malnutrition Sero." In connection with each product appear words, which if read hurriedly, might be taken by some as a statement of composition. For instance "Antitoxoid in Tuberculosis" is said to contain "Orco-plasm, Thyroid Extract and Phosporo Iodide. "Rheumatism Sero" is said to contain "Orco-plasm and Thymus Iodide." The circular contains the vague statement that orco-plasms are compounds that "represent unchanged protoplasm and serologic organic and inorganic substance." It contains also the unenlightening statement that "the Inorganic Substances in the Seros are in form Physiological Solutions." The circular wisely makes no attempt to define "phosporo-iodide" and "Thymus Iodide."—*Jour. A. M. A.*, July 5, 1924.

Cellasin.—Cellasin is sold by the Cellasin Company, Buffalo. Cellasin, then marketed by another firm, was reported on by the Council on Pharmacy and Chemistry about fifteen years ago. It was submitted to the Council with the claim that it was a ferment absorbed unchanged into the tissues, that it cured diabetes mellitus and that it cured tuberculosis and established immunity against this disease. The Council's report at that time brought out that the claims were unwarranted and that it contained, not a ferment, but a spore-producing bacterium which splits sucrose largely into lactic acid.—*Jour. A. M. A.*, July 5, 1924.

More Misbranded Nostrums.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Smith's Buchu Lithia Pills (C. F. Smith), containing powdered licorice, extracts of plant drugs including uva ursi and podophyllum, sodium, potassium, lithium and magnesium compounds, including nitrate and citrate, and soap. Famous Mineral Well Water (Famous Mineral Wells Water Co.), adulterated water, consisting in whole or in part of filthy and decomposed animal or vegetable substances. Foley's Kidney Pills (Foley and Co.), containing potassium nitrate, methylene blue, hexamethylene tetramin and plant material including resin and juniper oil. Iron-gland Tonic Tablets (Sanitary Products Co.), containing an iron compound and material of animal origin. Remlock 300 (Remlock Hills Laboratory), consisting of 99 per cent water and 1 per cent calcium hypochlorite, calcium chlorid and calcium carbonate. Trask's Ointment (D. Ransom, Son and Co.), consisting of extracts of plants, including tobacco and lobelia, mixed with fat. Tubbs White Pine Cough Cure (The Tubbs Medicine Co.), consisting essentially of pine tar, extract of a bark, chloroform, sugar, alcohol and water.—*Jour. A. M. A.*, July 12, 1924.

The Commercial Taint in Medical Advertising.—The advertisements of firms that sell apparatus, especially for physiotherapeutics and diagnostic uses, show a tendency to stress the idea that the purchaser of such apparatus will increase his income by impressing the layman with the scientific attainments of the individual who uses it. No decent man in the medical profession thinks of adding to his armamentarium for the purpose of financial gain. An advertiser's appeal to buy a piece of apparatus because of the "psychic effect" which it may produce on the patient is repugnant and insulting. Any firm that thinks it is going to obtain the good will of the medical profession by an appeal to the sordid is sadly mistaken.—*Jour. A. M. A.*, July 5, 1924.

An Anesthetic Monopoly.—U. S. patent 1,491,740 was issued April 22, 1924, and was assigned by the patentee to the S. S. White Dental Manufacturing Co. The specifications of the patent describe a process for making a nearly anhydrous nitrous oxid. The patentee claims patent rights, not only on his process for reducing the moisture-content and in nitrous oxid manufactured by that process, but on all nitrous oxid whatsoever conforming to the arbitrary standards stated in his claims, no matter how manufactured. The process, if novel, is presumably worthy of patent protection. But nitrous oxid has been recognized as a chemical entity since 1776, and it has long been possible to reduce by various processes the moisture-content incident to its manufacture. By what process of reasoning the patentee claims to have "invented" nitrous oxid of low moisture content and how the patent office came to concede his claim, are beyond the comprehension of persons not versed in the mysteries of patent logic and patent law. It would not be to the public interest for any concern to obtain a monopoly on nitrous oxid free from moisture. It is to be hoped that the S. S. White Dental Manufacturing Company will not be able to secure a monopoly on dry nitrous oxid.—*Jour. A. M. A.*, July 26, 1924.

NEWS

Chiropractor Meyer's Conviction Sustained.—The appellate division of the supreme court of Brooklyn has sustained the conviction of chiropractor Ernest G. H. Meyer, found guilty of second degree murder, April 8, and sentenced to from one to two years in the penitentiary at Sing Sing, following the death from diphtheria of a child whom he treated.—*Jour. A. M. A.*

Alumni, University Medical College, Kansas City, Missouri, will hold a reunion banquet Wednesday, October 15, 1924, 6:30 p. m., in the banquet room of the Kansas City Athletic Club, Eleventh and Baltimore, Kansas City, Missouri. During the noon hour of the same day, the various classes from 1882 to 1913, inclusive, will hold class reunion luncheons. The reunion banquet is a part of the program of the Kansas City Clinical Society, which will convene in Convention Hall, Kansas City, Missouri, October 13-18, 1924.

Eye, Ear, Nose and Throat Hospital for San Antonio.—Drs. J. H. Burleson, T. J. Walthall, O. H. Judkins, J. S. Steele and A. F. Clark, of San Antonio, have purchased property at 728 Main Avenue, San Antonio, known as the old Hugo homestead, and will remodel the present building into a hospital for the treatment of eye, ear, nose and throat cases. The front part of the building will be torn down and a two-story building erected in its stead, better adapted to the purpose in hand. The hospital will be open for the reception of patients as soon as the remodeling can be accomplished.

A New Chair at Jefferson Medical College.—In recognition of the far reaching developments of bronchoscopy in the diagnosis and treatment of diseases of the lungs and of esophagoscopy and gastroscopy in the diagnosis and treatment of diseases of the esophagus and stomach, the Board of Trustees and Faculty of The Jefferson Medical College have created a new Chair to be known as the Department of Bronchoscopy and Esophagoscopy. Dr. Chevalier Jackson, formerly Professor of Laryngology in The Jefferson, has been elected to the Professorship of the new Department. Dr. Fielding O. Lewis has been elected to fill the Chair of Laryngology vacated by Dr. Jackson.

The Virus of Foot-and-Mouth Disease.—Prof. Paul Frosch and Prof. H. Dahmen, who, according to the Lancet, June 28, have isolated the virus of foot-and-mouth disease, were invited by the Dutch government to demonstrate their discovery at Utrecht, June 16. They were able by ingenious methods of ultramicrophotography to photograph this filtrable virus after cultivating it on solid mediums. The virus proved to be, it is said, a short bacillus estimated at 0.1 micron in length, which they propose to name Loeffleria nevermanni. This work was reported at meetings of the Berliner Microbiologische Gesellschatt, April 7 and May 19; and at the request of the discoverers a committee of six was appointed to examine their claims. Professor Kleine of the Institute Robert Koch stated, May 19, that tests with the material that Frosch and Dahmen had supplied gave positive results.—*Jour. A. M. A.*

First Meeting Medical Council Veterans' Bureau.—The Medical Council of the Veterans' Bureau, composed of physicians from various sections of the country, recommended at its recent session in Washington, D. C., that a medical corps for the Veterans' Bureau be created by act of Congress. The Council believes that a permanent, qualified medical personnel is essential to the best operation of the bureau. The council declared that the officials of the bureau could improve the medical service by establishing postgraduate courses for training physicians in their special duties, such as hospital management, tuberculosis, neuropsychiatry, etc., and recommended the immediate establishment of diagnostic beds where troublesome cases might be properly observed by expert diagnosticians. Such an arrangement would be valuable when a difference of opinion about a veteran's disability or doubt as to diagnosis arose. The council also recommended that the government hospitals at New Haven, Conn., and at Denver, be re-established as training schools in tuberculosis; also that regional groups of diagnosticians consisting of the best available bureau and local medical personnel be established. A resolution was adopted recommending that a unit to provide in permanent form a record of the medical experiences of the Veterans' Bureau be created under the direction of the medical director. Dr. Ray Lyman Wilbur, president of Stanford University, and former President of the American Medical Association, was appointed permanent chairman of the council.—*Jour. A. M. A.*

The Southwest Fall Clinical Conference will be held in Convention Hall, Kansas City, Mo., October 13-18, 1924. This conference includes the annual meeting of the Medical Association of the Southwest, which will be held October 13-14; the annual meeting of the American Child Health Association, which will be held in Grand Avenue Temple, October 14-15-16, and the Kansas City Annual Fall Clinical Conference, which will be held October 16-17-18. These interests will be so managed as to offer those who desire to attend this clinical conference, the greatest possible opportunity to make good use of their time.

The scientific program of the Medical Association of the Southwest includes numerous authors well known to the profession of Texas. This program will be rendered during the afternoon hours, the morning hours being devoted to clinics at the hospital. In addition to the clinics, there will be, throughout the week, special clinics at the Convention Hall, beginning at 11 o'clock each day.

The Honorable Herbert Hoover, Secretary of Commerce, in the Cabinet of the President, is President of the American Child Health Association. The principal speakers during the conference of this organization will be Drs. Geo. E. Vincent, President of the Rockefeller Foundation, and Surgeon General Hugh S. Cumming of the United States Public Health Service. There will be other speakers and an interesting program besides.

The Kansas City Clinics will be conducted principally by local talent, but numerous distinguished guests will be present and will conduct clinics in their respective specialties.

The social activities for the week will be extensive. There will be commercial and scientific exhibits. The Hotel Muehlbach is the official headquarters. Round-table luncheons will be held at the Hotel Baltimore. There will be numerous alumni dinners in the various hotels and clubs. Dr. E. H. Skinner, 1020 Rialto building, Kansas City, Missouri, is Secretary of the Medical Association of the Southwest. Dr. Frank C. Neff, 1110 Rialto building, is local chairman for the American Child Health Association, and headquarters of the Kansas City Clinical Society are 631 Rialto building.

SOCIETY NEWS

Cameron County Medical Society met in Harlingen, July 24, 1924, with 18 members and 6 visitors present.

The meeting was called to order following a supper at the Van Noy Cafe, during which a very enjoyable program of talks and readings was rendered by various members of the dinner party. The Secretary, Dr. John Hunter, was prevailed upon to relate a recent personal experience with a chiropractor. Dr. Hunter was, so far as he knew, in perfect health, and had danced the night before until midnight. He called upon the chiropractor as an experiment, and found that he had heart disease, kidney trouble and prostatic enlargement, all of which could be re-

lieved by a few treatments in a short time. Upon his departure, he informed the chiropractor that he had been practicing medicine for fifty years and felt justified in telling him that he was several sorts of a liar. The chiropractor was as silent as a "cast-iron nigger hitching-post."

Dr. J. C. Watkins of Harlingen, presented the patient suffering from an injury to the brain, which he had brought before the society on a previous occasion. The patient appeared to be perfectly normal at this time.

Dr. Dudley Jackson of San Antonio, read a paper on "Diagnosis and Treatment of Intestinal Obstruction."

Dr. Rex R. Ross read a paper on "Prostatic Surgery."

Dr. G. R. Yantis of Brownsville, read a paper on "The Two Most Important Toxemias of Pregnancy."

The committee appointed to invite the Southwest Texas District Medical Society to hold its January meeting in the Valley, dividing the time between McAllen and Brownsville, reported that the invitation had been accepted.

Following adoption of a resolution of appreciation of the presence of the visiting doctors, the Society adjourned, to meet in Brownsville in September.

Eastland County Medical Society met in joint session with the Comanche County Medical Society, at Gorman, August 12, with 46 members and guests in attendance. This joint session, at Gorman, is an annual custom of these two societies. It is always well attended and enjoyed fully. The scientific program was pleasantly interspersed with a watermelon feast, an example of Gorman hospitality. The program was followed by a chicken dinner, also an evidence of the good fellowship of the local profession and citizens. The Ladies' Auxiliary met with the two medical societies for a time, but later held its own meeting. The ladies were entertained by a drive and a swimming party at Bass Lake.

The following honor guests were present: Drs. G. V. Brindley and Claudia Potter of Temple; J. W. Torbett of Marlin; O. O. Gain of Dublin; J. T. Plemmons, J. E. Self and Patti Fay Inzer of De Leon; P. H. Chilton and A. J. Cray of Comanche; Mrs. C. D. Cupp of Breckenridge; Dr. C. P. Schenck and Dr. Holman Taylor of Fort Worth.

The following scientific program was rendered:

Address of Welcome, Mr. J. W. Cockrell of the *Gorman Progress;* Response, Councilor J. H. Caton of Eastland; "Surgery and Anesthesia," Dr. G. V. Brindley, Temple—discussed by Drs. C. Potter, S. C. Richardson and W. C. Palmer; "Classification and Treatment of Nephritis," Dr. J. W. Torbett of Marlin—discussed by Drs. C. O. Terrell, K. J. Scott, Holman Taylor and R. C. Ferguson; "Removal of Fence Staple from Esophagus," with *x*-ray plates, Dr. C. P. Schenck of Fort Worth—discussed by Drs. Chas. Hale, C. Potter and A. J. Gray; "Summer Diarrhea in Children," Dr. R. C. Ferguson of Eastland—discussed by Drs. M. L. Stubblefield, C. O. Terrell, P. H. Chilton and A. J. Gray, and "Some Problems of Medicine," Dr. Holman Taylor of Fort Worth.

The next meeting will be held in Rising Star, in October.

Tarrant County Medical Society met at the Fort Worth Children's Hospital, July 15. Ward walks were conducted by the staff of the hospital, Drs. Covert, Schwarz, Godley, Spivey, Edwin Davis, Clayton and J. H. McLean, in advance of the meeting.

Dr. J. D. Covert discussed "Lactic Acid Milk." His method of preparing the milk is as follows: First, boil the fresh whole milk for from five to six minutes. After the milk has cooled, add U.S.P. lactic acid with a medicine dropper until a fine flocculent curd forms, stirring continually. Dr. Covert stated that he has had good results with milk prepared in this manner, particularly in difficult feeding cases.

Dr. J. L. Spivey presented a case of Mongolian idiocy and another of microcephalus. In both instances the Wassermann test of the spinal fluid was four plus.

Dr. E. G. Schwarz discussed "Infectious Diarrheas in Infancy." He stated that 29 per cent of the cases are due to the dysentery bacillus, in which the Shiga produces the highest mortality, about 40 per cent. The symptoms may be divided into three groups, those of (1) the toxic period, (2) the period of activity and (3) the period of convalesence. Starvation is the most frequent cause of death, and it is the main condition to overcome in the course of treatment. Dr. Schwarz had not been successful with serotherapy in these cases.

Dr. L. O. Godley discussed "Pyloric Stenosis." The most characteristic symptoms are found in otherwise normal children. There is first vomiting at intervals, gradually increasing in severity until the vomiting is expulsive in character. There is constipation, and what stools there are of the starvation type. There is a loss of weight of from three to four ounces per day. The peristaltic wave, coursing toward the right, is one of the most prominent physical signs. There is abnormal gastric retention and a palpable tumor mass. Cases are of two types, the severe and the mild. In the mild type, there are remissions of the symptoms, which indicates a partial obstruction only. Surgery is the best treatment. In Holt's Clinic those cases operated upon within four weeks show a mortality of 13 per cent; more than four weeks duration, 35 per cent. In breast-fed infants, the mortality is 11 per cent, while in those artifically fed, it is 35 per cent. In patients weighing less than seven pounds, the mortality is less than 28 per cent; over that weight, 9 per cent. The mortality weight increases in direct proportion to the loss of weight. Holt states that in cases in which diagnosis is made early, and competent surgery done, the mortality rate should not exceed from 8 to 10 per cent.

Dr. David R. Taylor, a dentist, presented a patient, ten years of age, who had lost three of her upper front teeth from an accident. The teeth were picked up from the ground and brought with the patient to his office three hours after the accident occurred. After immersing the teeth in normal salt solution for a time, the root cells were filled with gutta percha and the teeth reinserted. Because the teeth on each side were not permanent teeth, a brace was made and the reinserted teeth held in place by attaching the brace to a specially fitted skull cap. Later, a gold splint was cemented in. Five weeks following the removal of the splints, the patient is able to eat taffy candy, and use the reinserted teeth as formerly. The *x*-ray shows a partial restoration of the peridental membrane.

Dr. C. F. Clayton presented a patient suffering from osteomyelitis of the radius, of the acute suppurative hematogenous type. Illness began with a pneumonia, which was followed by multiple abscesses over the body and by empyema. The osteomyelitis developed in the right radius, completely destroying the shaft of the bone. The patient has improved rapidly following operation. The *x*-ray shows the shaft of the radius partially regenerated, and there is good use of the arm.

Following the conclusion of the scientific program, dinner was served by the hospital management.

The Mid-West Texas District Medical Association (Second District Medical Society) will hold its next

regular meeting in Stamford, October 21, next, and members of the State Medical Association are cordially invited to attend. Any offers of papers for this occasion should be made direct to Dr. T. Wade Hedrick, Abilene, the secretary, who will see that they get into the proper channels.

The Panhandle District Medical Society (Third District) will meet in Lubbock, September 16-17. A splendid scientific program has been prepared, and the social features usually accorded the attendants on the meetings of this organization, have been arranged. The profession of Texas is invited to attend.

CHANGES OF ADDRESS.

Dr. C. L. Prichard, from Fort Worth to Anson.
Dr. R. A. Harris, from Winnsboro to Sulphur Springs.
Dr. F. R. Winn, from Angleton to Alvin.
Dr. J. F. Gibson, from Paris to Olympia, Washington.
Dr. D. R. Woods, from Weatherford to Olney.
Dr. A. G. Collins, from Rockwall to Royse City.
Dr. J. O. Rogers, from Italy to Kaufman.
Dr. C. L. Behrns, from Cherokee to Alice.
Dr. H. E. Downs, from Batson to Dallas.
Dr. J. Martin, from Hillsboro to Pope, Mississippi.
Dr. G. A. Deason, from Garrison to Port Arthur.
Dr. W. W. McCuiston, from Paris to Antlers, Okla.
Dr. M. S. Molloy, from El Paso to Ysleta.
Dr. J. J. Ely, from Jacksonville to Pilot Grove, Missouri.
Dr. R. D. Smart, from Breckenridge to San Diego, California.
Dr. A. J. Pollard, from Alvin to Harlingen.

DEATHS

Dr. John M. Hons of San Marcos, died at his home, August 17.

Dr. Hons was born near Burton, Texas, in 1851, in the schools of which community, and the Bastrop Military Institute, he received his early education. He obtained his B. A. degree from the University of Virginia, and his M. D. degree from the Tulane Medical College, New Orleans, in 1871. He began practicing at Burton, where he resided for more than fifteen years; he then moved to San Marcos, where he practiced until the time of his death.

Dr. Hons was a member of the Methodist Church and had served as a steward in his local church for many years. He at one time served as a trustee of the Coronal Institute, and also of the State Teachers' College. He is survived by his wife, two daughters and one son.

Dr. Charles Edwin Heartsill died at his home, in Marshall, Texas, June 14, after an illness of almost five years.

Dr. Heartsill was born in Marshall, April 8, 1869, and spent the most of his life in the home in which he died. He received his preliminary education in the Boys' College in Marshall, and Texas A. & M. College, taking his M. D. degree from Tulane University, in 1893.

At an early age he became a member of the First Methodist Episcopal Church South, and throughout his life was faithful in attendance and active in the work of the church, serving as a steward and later as president of the board of stewards. In 1890 he became a member of the Masonic Lodge, and served as Junior Warden and later as Worshipful Master of the Blue Lodge. He held every office from the lowest to the highest in the Grey Commandery No. 16, K. T. In 1918 he took the Shriner degree from Hella Temple at Dallas. He served the city of Marshall as health officer for about six years, giving the same devoted service in that capacity as he rendered in everything that he undertook.

Dr. Heartsill had long been an active member of Harrison County Medical Society, at one time serving that organization as its president. He is survived by

DR. C. E. HEARTSILL.

his wife, Mrs. Cora Clemmons Heartsill, and two children, Chas. E. Heartsill, Jr., and Irene, and by his sisters, Misses Mattie and Katie Heartsill, Mrs. C. C. Friend, Mrs. E. C. Whaley and Mrs. Fred Hesdeburg, all of whom reside in Marshall. The funeral services were held in his home, the Masonic Lodge taking charge at the grave.

In the death of Dr. Heartsill, Marshall has lost one of her most valiant and devoted citizens and the medical profession one of its ablest and most conscientious and untiring workers. His memory will ever be green in the hearts of those who knew and loved him, and their name is legion.

Dr. Mathew H. Echols, of Wills Point, died at San Antonio, August 26, 1924, of heart disease, and was buried at his home town, August 28.

Dr. Echols was born in 1857. He received his M. D. degree from the Kentucky School of Medicine, Louisville, Kentucky, in 1891. He was a consistent member of the Cumberland Presbyterian Church, and had been for many years a member of his county medical society and the State Medical Association. Dr. Echols' wife, Mrs. Lizzie Echols, died in July, 1924.

BOOK NOTES

Radiography in the Examination of the Liver, Gall-Bladder and Bile Ducts. By Robert Knox, M. D., Hon. Radiographer, Kings College Hospital, London, England. Cloth, 8 vo., pp. 64. C. V. Mosby Company, St. Louis. $2.50.

One of the first impressions of this attractive monograph is an appreciation of the exceptionally good results secured in reproducing röentgenograms of such a difficult region. This drawback to a large number of books on röentgenology has, to a large degree, been avoided in this volume.

In a clear and understandable manner, the author has outlined the present status of our knowledge of radiography of the gall-bladder region, and has carefully evaluated the usefulness of this means of diagnosis. The following aspects of the subject are considered: Anatomical considerations; pathology, classification and chemical composition of gall-stones; experimental investigation on absorption; coefficients of gall-stones and surrounding tissues; radiographic appearance of gall-stones; technique of the examination; situations in which gall-stones may be found; differential diagnosis; the pathological gall-bladder; record of cases; resume of the literature and general conclusions.

This book on a subject so frequently under discussion, will be found useful not only by the röentgenologist, but also by the surgeon and the internist.

Rest and Other Things. By Allen K. Krause, A. M., M. D., Associate Professor of Medicine, Johns Hopkins University; Director of Dow's Tuberculosis Research Fund, Johns Hopkins Hospital; Physician in Charge of Phipps Tuberculosis Dispensary, Johns Hopkins Hospital; Lecturer, Trudeau School of Tuberculosis; Editor "Review of Tuberculosis." 12 mo., Cloth, pages 216. Price $4.75. C. V. Mosby Williams & Wilkins Company, Baltimore, Md.

Like all other books from Dr. Krause's pen that we have seen, this little volume brings a message of great interest to the tuberculous patient, the physician, the nurse, and the tuberculosis and social service worker everywhere. It is not so much that the author has said anything new, but he has put accepted knowledge in a most palatable form. He has the art of sustaining interest in what he has to say. He knows what he wishes to say, and says it. We heartily recommend this book to our readers. We believe that physicians will find its perusal helpful.

The Science and Art of Anesthesia. By Colonel Wm. Webster, D. S. O., M. D., C. M., 8 vo., Cloth, pages 216, Price $4.75. C. V. Mosby Co., St. Louis.

This book embraces 22 chapters of very profitable reading for any one interested in the subject of anesthesia, which should include all who practice medicine. The author's insistence upon the seriousness of giving an anesthetic and the responsibility devolving upon the anesthetist, is a stand well taken. The success or failure of an operation often hinges upon the skill of the anesthetist.

The chapter on local anesthesia and spinal analgesia, is hardly up-to-date. The author appears to make the mistake of so many prejudiced writers on spinal analgesia, of basing his conclusions on statistics in cases where cocain was the drug used. The author's references in this chapter did not include any American investigators. Dr. Webster would do well to acquaint himself with the splendid work being done along this line in the United States. He admits that his treatment of the whole subject of local analgesia is quite "condensed," and we agree with him without argument.

In his description of the different stages of anesthesia produced by the various anesthetics, he proves himself to be a close observer and a master of both the science and art of general anesthesia.

Nonsurgical Drainage of the Gall Tract, a treatise concerned with the diagnosis and treatment of certain diseases of the biliary and allied systems, in their relation to gastro-enterology and general clinical medicine. By B. B. Vincent Lyon, A. B., M. D. Chief of Clinic, Gastro-Intestinal Department of the Jefferson Hospital; Associate in Medicine in the Jefferson Medical College; attending physician (formerly pathologist) to the Methodist Episcopal Hospital, Philadelphia and New York, 1923. Octavo, Cloth. Price $10.00. Thirty-six chapters, 640 pages, illustrated with 175 engravings and 10 colored plates. Lee & Febiger, Philadelphia and New York, 1923.

This work by Lyon is of a revolutionary character in the matter of the treatment of gall-bladder and biliary diseases. There have been many champions of Dr. Lyon's "nonsurgical drainage," and, on the other hand, there have been many bitter opponents, especially among surgeons who declare that there is no permanent good accomplished by the method and that oftentimes hurtful delay is occasioned by its use. Be that as it may, the work describes very minutely the anatomy and physiology of the biliary and allied systems, and gives in a succinct manner the theory upon which "nonsurgical drainage of the gall tract" is based. A number of case reports illustrating the benefits to be derived from this therapeutic procedure, are given. It is noted with special pleasure, that Dr. Lyon has adopted the attitude of the true scientist in giving all the facts as he has observed them, whether favorable to his contentions or not. It is only in this straightforward manner that any good can be accomplished along scientific lines, and especially in the field of scientific medicine. We heartily commend the study of this book to our readers.

X-Ray Observations for Foreign Bodies and Their Localization. By Captain Harold C. Gage, A. R. C., O. I. P., Consulting Radiographer to the American Red Cross Hospital of Paris; Radiographer in Charge Military Hospital V. R. 76, Ris Orangis and Complementary Hospitals. Cloth, 12 mo., pages 83. C. V. Mosby Co., St. Louis. $1.75.

One of the many intangible yet valuable bits of salvage from the World War, is the effort of the medical profession to turn to account in civilian practice the lessons learned and the experience gained. This has been accomplished, perhaps, most successfully in the ever-widening field of industrial medicine.

These facts will bespeak for Mr. Gage's little book more notice than is usually accorded a "war" book, for it is the result of the work done by Mr. Gage in the Hospital Center at Ris Orangis. In the introduction, written by Colonel Joseph A. Blake, attention is called to the outstanding feature of the work, the method of localization by three intersecting lines, devised by Captain Gage.

The technical descriptions of the various methods of localization, are complete enough for the radiographer who seeks at every point the "how" and "wherefore," and yet they are so clear as to make plain the process to one not possessing a knowledge of the intricacies of radiology. The attainment of this result is helped considerably by well chosen and judiciously placed illustrations.

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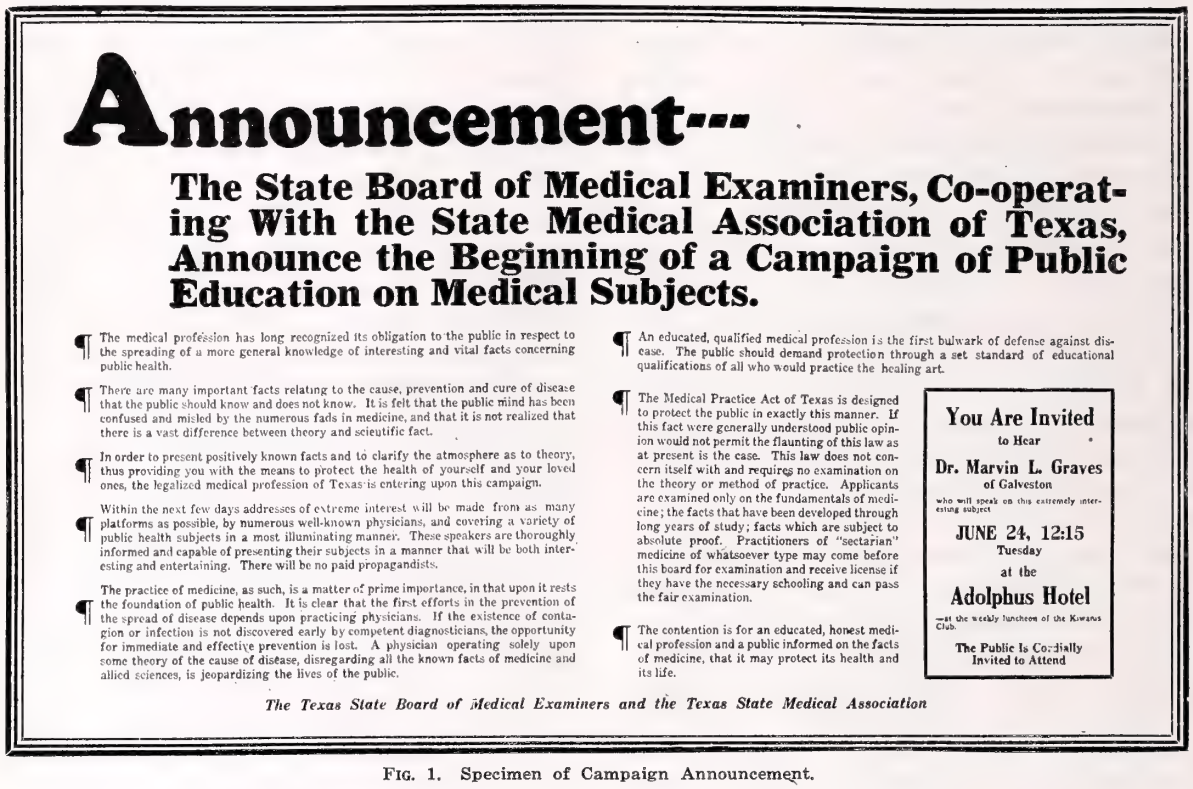
Vol. XX **October 1924** **No. 6**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Selling Scientific Medicine to the Public.—It seems strange that in this day of enlightenment, when the medical profession stands so high in public esteem, it should appear to be necessary to "sell" to the public a service based on scientific medicine. Never before in the history of the world has scientific medicine stood out so nobly, and never before has such tribute been paid its practitioners. At the same time, never before in the history of civilization has the public indulged so greatly in spurious medical service. It is not our contention that there have not been quacks in the past, or that quackery has not been rampant before, but there appears to be no room for controversy in the flat statement that a greater proportion of people in groups in this day and time, take after fads and fancies in curative medicine. It is this situation that our publicity campaign is intended to improve. No one is obsessed with the idea that scientific medicine is not on a firm footing, or that it is due to depart hence at any time soon, but it would seem that if it is being neglected by the great bulk of the people, including those who need it most, it is time for somebody to be insistent that a satisfactory sales system be inaugurated.

The much heralded investigation conducted by the Illinois Medical Association some time ago, disclosed a state of affairs which, while it may not be applicable throughout to Texas, undoubtedly points to the need of some activity on our part. There can be no question as to the careful manner in which the statistics recited were gathered; neither can there be any manipulation of the figures to indicate much else than the facts in the case. It seems that 6,772 people were consulted, to be exact, and that an effort was made to select these from every group in our social life. Questions were propounded in a manner calculated to bring out the truth without arousing prejudice. Of this large number interviewed, 7 per cent were opposed to so-called medical doctors and 7 per cent were emphatically for the reputable, regular practitioners of medicine. That seems to be a fifty-fifty proposition, but it really is not. We might expect to find 7 per cent of any group antagonistic to any announced principle, no matter of what character or type, but to find only 7 per cent of the people, 100 per cent of whom must rely absolutely on scientific medicine for protection, in favor of practitioners of scientific medicine, is enough to occasion prayerful consideration. And while we are prepared to find that 13 per cent of any group have not had occasion to consult physicians, we must be astonished that 93 per cent habitually consult practitioners of the numerous systems of drugless healing, including prayer, manipulation and simple neglect. There may be something wrong with these figures, but after all is said and done, there is room for enough truth to make us fear that we have been neglecting one of our principal obligations to our people, namely, informing them as to the value of the great discoveries of medical science. Before the days of expert publicity, it did not matter so much, but in this day of effective advertising, the propagandists find

an opportunity to fool the people, that they are quick to take advantage of. The result is individually disastrous, even though on the whole there is an improvement in health, and a distinct betterment of the scientific and material welfare of the medical profession. The thought should not be whether there has been an improvement, but whether there should not have been much more improvement; not whether there has been disaster, but whether there should not have been less disaster, and not whether there have been quacks and quackery, but whether there might do its duty. Those who have stood in the forefront of the battle at Austin, will remember not only the misguided followers of the sects and cults who opposed them, but the well-meaning individuals who have questioned the advisability of the legislation sought on the ground that the people at home were opposed to it. Those who opposed us on these grounds frequently admitted that the legislation should be enacted, but insisted that they could not act favorably until their people said so—which was not an unreasonable position to take.



Announcement---

The State Board of Medical Examiners, Co-operating With the State Medical Association of Texas, Announce the Beginning of a Campaign of Public Education on Medical Subjects.

¶ The medical profession has long recognized its obligation to the public in respect to the spreading of a more general knowledge of interesting and vital facts concerning public health.

¶ There are many important facts relating to the cause, prevention and cure of disease that the public should know and does not know. It is felt that the public mind has been confused and misled by the numerous fads in medicine, and that it is not realized that there is a vast difference between theory and scientific fact.

¶ In order to present positively known facts and to clarify the atmosphere as to theory, thus providing you with the means to protect the health of yourself and your loved ones, the legalized medical profession of Texas is entering upon this campaign.

¶ Within the next few days addresses of extreme interest will be made from as many platforms as possible, by numerous well-known physicians, and covering a variety of public health subjects in a most illuminating manner. These speakers are thoroughly informed and capable of presenting their subjects in a manner that will be both interesting and entertaining. There will be no paid propagandists.

¶ The practice of medicine, as such, is a matter of prime importance, in that upon it rests the foundation of public health. It is clear that the first efforts in the prevention of the spread of disease depends upon practicing physicians. If the existence of contagion or infection is not discovered early by competent diagnosticians, the opportunity for immediate and effective prevention is lost. A physician operating solely upon some theory of the cause of disease, disregarding all the known facts of medicine and allied sciences, is jeopardizing the lives of the public.

¶ An educated, qualified medical profession is the first bulwark of defense against disease. The public should demand protection through a set standard of educational qualifications of all who would practice the healing art.

¶ The Medical Practice Act of Texas is designed to protect the public in exactly this manner. If this fact were generally understood public opinion would not permit the flaunting of this law as at present is the case. This law does not concern itself with and requires no examination on the theory or method of practice. Applicants are examined only on the fundamentals of medicine; the facts that have been developed through long years of study; facts which are subject to absolute proof. Practitioners of "sectarian" medicine of whatsoever type may come before this board for examination and receive license if they have the necessary schooling and can pass the fair examination.

¶ The contention is for an educated, honest medical profession and a public informed on the facts of medicine, that it may protect its health and its life.

You Are Invited
to Hear
Dr. Marvin L. Graves
of Galveston
who will speak on this extremely interesting subject
JUNE 24, 12:15
Tuesday
at the
Adolphus Hotel
—at the weekly luncheon of the Kiwanis Club.
The Public Is Cordially Invited to Attend

The Texas State Board of Medical Examiners and the Texas State Medical Association

FIG. 1. Specimen of Campaign Announcement.

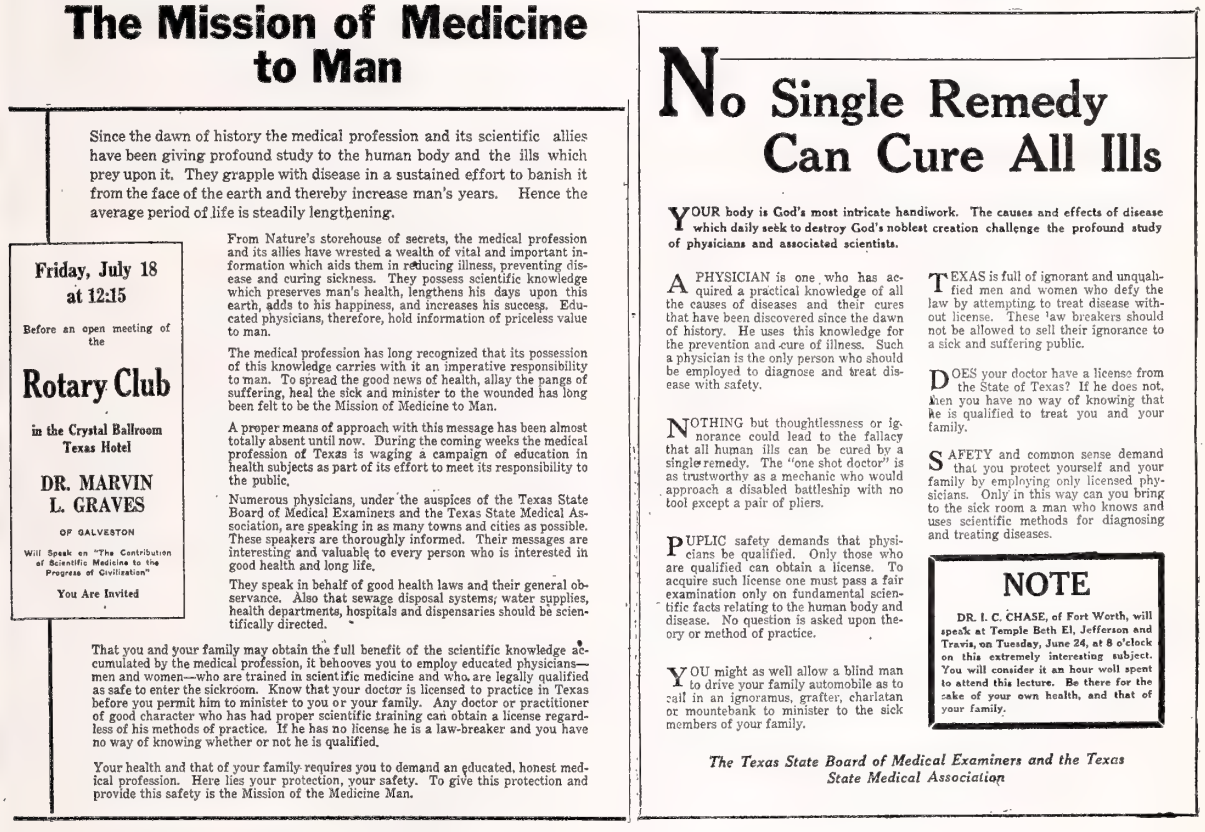
should not have been less quacks and quackery.

Whether the State Medical Association has adopted the best salesmanship possible under the circumstances is another story, and it is one that has been frequently and variously told. Our publicity campaign was not launched in a moment, nor was it the result of the excitement of an occasion. The problem had been in contemplation for many years, and was brought to solution in the necessity of supporting the claims of friends of public health legislation, that the people be informed in order that the Legislature

If there were no other reasons for this campaign than to make it possible to legislate for the protection of the public health, that would be enough. But there are other reasons, as we have already said. We must point the way to adequate medical service. To do this and avoid following the advertising and publicity methods of the charlatan has been the hard problem, but it is felt that it has been solved in a manner fairly satisfactory. We do not believe that the newspaper advertising put out in the name of the medical profession in this campaign is subject to just criticism in this respect. Whether

the money spent has been justified must be considered. We presume the general commanding an army about to enter battle does not worry over the cost of the ammunition expended in the principal assault. He may subsequently give thought to the justification of collateral campaigns from a financial standpoint, but where it is a matter of attaining his objective, he is going to disregard cost. Whether a campaign is going to be a brief one, or long drawn out, is also a consideration. The conditions we are confronting against have become chronic, and there seems to be no amputation method possible under the circumstances. We must plan now our campaign for the future. We may bring into the fight helpful allies; in fact, we planned to eventually, and perhaps soon, shift the principal burden of the attack, but for the present we must justify ourselves and determine just how actively and how vigorously we shall proceed.

We are impelled to these remarks not by any fixed opposition to the campaign, but because of the apparent indifference of county societies in carrying on the work in their respective territories. We hear occasionally of a public health lecture being delivered by a speaker from a county society, but we should be hearing daily of such occurrences. As we have already said, we are not obsessed with the idea that the medical profession has lost caste, or that its future glory will be dimmed, but it is undoubtedly a fact that there is an obligation incumbent upon us by virtue of our knowledge of scientific medicine, and we must discharge it; we must modernize our methods of telling the story of scientific medicine.



The Mission of Medicine to Man

Since the dawn of history the medical profession and its scientific allies have been giving profound study to the human body and the ills which prey upon it. They grapple with disease in a sustained effort to banish it from the face of the earth and thereby increase man's years. Hence the average period of life is steadily lengthening.

Friday, July 18 at 12:15

Before an open meeting of the

Rotary Club

in the Crystal Ballroom Texas Hotel

DR. MARVIN L. GRAVES

OF GALVESTON

Will Speak on "The Contribution of Scientific Medicine to the Progress of Civilization"

You Are Invited

From Nature's storehouse of secrets, the medical profession and its allies have wrested a wealth of vital and important information which aids them in reducing illness, preventing disease and curing sickness. They possess scientific knowledge which preserves man's health, lengthens his days upon this earth, adds to his happiness, and increases his success. Educated physicians, therefore, hold information of priceless value to man.

The medical profession has long recognized that its possession of this knowledge carries with it an imperative responsibility to man. To spread the good news of health, allay the pangs of suffering, heal the sick and minister to the wounded has long been felt to be the Mission of Medicine to Man.

A proper means of approach with this message has been almost totally absent until now. During the coming weeks the medical profession of Texas is waging a campaign of education in health subjects as part of its effort to meet its responsibility to the public.

Numerous physicians, under the auspices of the Texas State Board of Medical Examiners and the Texas State Medical Association, are speaking in as many towns and cities as possible. These speakers are thoroughly informed. Their messages are interesting and valuable to every person who is interested in good health and long life.

They speak in behalf of good health laws and their general observance. Also that sewage disposal systems; water supplies, health departments, hospitals and dispensaries should be scientifically directed.

That you and your family may obtain the full benefit of the scientific knowledge accumulated by the medical profession, it behooves you to employ educated physicians—men and women—who are trained in scientific medicine and who are legally qualified as safe to enter the sickroom. Know that your doctor is licensed to practice in Texas before you permit him to minister to you or your family. Any doctor or practitioner of good character who has had proper scientific training can obtain a license regardless of his methods of practice. If he has no license he is a law-breaker and you have no way of knowing whether or not he is qualified.

Your health and that of your family requires you to demand an educated, honest medical profession. Here lies your protection, your safety. To give this protection and provide this safety is the Mission of the Medicine Man.

The Texas State Board of Medical Examiners and the Texas State Medical Association

No Single Remedy Can Cure All Ills

YOUR body is God's most intricate handiwork. The causes and effects of disease which daily seek to destroy God's noblest creation challenge the profound study of physicians and associated scientists.

A PHYSICIAN is one who has acquired a practical knowledge of all the causes of diseases and their cures that have been discovered since the dawn of history. He uses this knowledge for the prevention and cure of illness. Such a physician is the only person who should be employed to diagnose and treat disease with safety.

NOTHING but thoughtlessness or ignorance could lead to the fallacy that all human ills can be cured by a single remedy. The "one shot doctor" is as trustworthy as a mechanic who would approach a disabled battleship with no tool except a pair of pliers.

PUPLIC safety demands that physicians be qualified. Only those who are qualified can obtain a license. To acquire such license one must pass a fair examination only on fundamental scientific facts relating to the human body and disease. No question is asked upon theory or method of practice.

YOU might as well allow a blind man to drive your family automobile as to call in an ignoramus, grafter, charlatan or mountebank to minister to the sick members of your family.

TEXAS is full of ignorant and unqualified men and women who defy the law by attempting to treat disease without license. These law breakers should not be allowed to sell their ignorance to a sick and suffering public.

DOES your doctor have a license from the State of Texas? If he does not, then you have no way of knowing that he is qualified to treat you and your family.

SAFETY and common sense demand that you protect yourself and your family by employing only licensed physicians. Only in this way can you bring to the sick room a man who knows and uses scientific methods for diagnosing and treating diseases.

NOTE

DR. I. C. CHASE, of Fort Worth, will speak at Temple Beth El, Jefferson and Travis, on Tuesday, June 24, at 8 o'clock on this extremely interesting subject. You will consider it an hour well spent to attend this lecture. Be there for the sake of your own health, and that of your family.

The Texas State Board of Medical Examiners and the Texas State Medical Association

FIG. 2. Specimens of Quarter-Page Ads.

Our Publicity Campaign Advertisements are reproduced herewith, exactly as they appeared in the newspapers. As explained in a former editorial, each speaking engagement was preceded by the "Announcement" ad, covering a half-page (Fig. 1), and one or both of the ads shown in Figure 2, in the local newspapers. The copy for the ads had been worked and reworked by the Council on Legislation and Public Instruction for

several months, not to mention the careful attention of one of the established advertising agencies in the State, and the ads as shown are the result of the combined effort of the best lay and professional minds we could bring to bear on the subject. It was deemed essential to avoid the appearance of propaganda. At the same time it was necessary that we reach the public if we were to accomplish anything. How to combine medical ethics and modern publicity proved quite a difficult problem. And so far as we are able to judge, the final decision was as nearly a solution as could be hoped for.

It would be difficult to assemble in a single ad so much of professional dignity and impressive truth pertaining to scientific, ethical medicine, as was included in the "Announcement." We might have said much more, and could have gotten by with much less. The opportunities for statements of fact such as those found in the ad are unlimited, and quite probably the simple statement that such a campaign was being launched by the two bodies responsible for it, would have been sufficient. It was thought best to follow the advice of advertising experts and support our "announcement" with enough facts to give it a status above and beyond the confidence of the public in our integrity as a profession. The other two ads were designed to attract attention and direct it to the proposed lecture, and at the same time impress the reader with the character of discussion that might be expected. The discussion was professedly for the purpose of emphasizing scientific medicine and the desirability of protecting the public against impostors who presume to dabble in health affairs. Whether these supplementary ads approached too closely the style of the propagandists might have been a subject for discussion, but here again we were constrained to follow the advice of advertising experts. We believe there is nothing in any of these ads that will be held as essentially in violation of the principles of medical ethics or good taste.

Of course, there was much newspaper publicity not paid for, but this was of such great variety that it may not well be discussed. An effort was made to control even this publicity, that our friends in the newspaper game might not in their zeal inadvertently offend the ethics of the medical profession. It is believed that in this endeavor we were quite successful.

One of the amusing results of this advertising campaign was its inspiration to the quack to do likewise. There were two reasons why the quack did not meet us clearly in this issue. First, display advertising is expensive; second, the newspapers would not accept much of the advertising copy offered by these people just at this time. A "chiropractic masseur" in one of our western communities, came out with a display ad, endorsing the address of one of our principal speakers, and attempting to apply his restrictions on the ignorant and vicious practitioner of medicine to the ignorant and vicious of his own type, contrasting their practices with his own. In other words, he pled for the same protection we were pleading for, entirely overlooking the fact that he himself had not complied with any of the requirements of the State and in the protection of which we were speaking. He assumed that we had one system of practice and he had another; that we should be secure, each of us, in our practice, and let the purchaser choose between us. It is doubtful whether this individual received due returns on his investment. The makeup man very cleverly set up an undertaker's ad just beneath the ad referred to. It is an ill wind that blows no good.

The Lay Press and Our Educational Campaign.—In view of the long existing and often rather emphatically expressed antagonism between the lay press and the medical profession on the subject of advertising, it has been gratifying to those of us in charge of the publicity and educational campaign of the State Medical Association, to note the cheerful assistance and ready coöperation of the great majority of the newspapers. It has been still more gratifying to read the many and no doubt sincere complimentary references to the medical profession and its altruistic motives in prosecuting the campaign. We have quite probably a very incomplete collection of clippings referring to the various addresses and to the movement in general and particular, but there is a big drawer full of them. And in this connection, we would urge that those of our readers who have in their possession or can secure such clippings, send them to us for our permanent files. There were newspapers, of course, which were antagonistic, and others which were not interested. Of the latter we will have something to say later. For the most part, the fullest coöperation was offered, and in many instances very full abstracts of addresses were published. Indeed, our speakers did not furnish the papers with as much material as they would have been glad to publish. Our campaign was to this extent deficient. The fault may be laid at the door of inexperience.

Perhaps it will be interesting to reprint some of the editorial comments of the press. At any rate, it would seem desirable to pre-

serve certain of them in our archives. The following, under the caption, "New Day in Medicine," from the *Fort Worth Star-Telegram,* was republished in the *Crawford Advance,* the *Palestine Herald* and the *Corsicana Daily Sun* (and perhaps elsewhere):

"Significant of the new day in medicine, newspaper readers of Texas are treated to the innovation of boldface ads announcing a campaign of public education on medical subjects conducted through the coöperation of the State Board of Medical Examiners and the State Medical Association of Texas. Prominent physicians and public health experts will make public speeches in various parts of the State, the design being to increase the general knowledge of diseases, their prevention and cure.

"An examination of the wording of the advertisements announcing the campaign leads to the surmise that it is directed principally against certain 'fads in medicine' against which organizations of 'regular' physicians have been militant for some time past. But even if the campaign should result in banishing these fads from our midst, this is not likely to be its chief result. It must inevitably, in accomplishing its designed purpose, achieve another, that of increasing the public knowledge of medical science.

"The new day in medicine involves a complete reversal of old practices. Physicians are taking the public into their confidence. Medicine, which has slowly gravitated from its onetime classification as a mystery, closely allied with the black arts, has grown to regard itself as what it really is—the science of prolonging human life. Preventive medicine is a development of recent times, but it is the most important phase of medicine. Upon it is founded all the sanitary and anti-epidemic measures embodied in public health work. The admission of the public into the mysteries of the medical profession began with the first recognition of the correctness of the human principle that prevention is better than cure.

"A public educated in methods for preventing disease will make less work for physicians, it is true. But by the very virtue of the knowledge that equips it to prevent disease, it will possess the knowledge of disease that will forbid it from resorting to quacks and faddists. Thus regular physicians will profit along with the public. Aside from the pecuniary considerations involved, there is a high moral consideration, that of best promoting the health of the race. The nature of their profession makes physicians altruistic. This campaign is but an organization and intensification of that altruism."

The *Elgin Courier* presents the matter in a very concise manner from the viewpoint of the layman, and very largely from the viewpoint of the physician. The editor is, of course, entirely wrong in his surmise that the position of the physician as relates to advertising is the same as that of the mechanic and the manufacturer. If the mechanic misleads an individual into believing that he can render a service which he in fact cannot render, the only harm is perhaps injury to a *machine,* and fraud. If a merchant informs the public as to his merchandise, the public is in a position to judge for itself whether or not to buy. If the judgment of the public is bad, and it buys a product that is not worth the money, fraud is about all there is to it. If the doctor should advertise that he can do things that he cannot do, or is likely not to be able to do, there is not only the element of fraud but perhaps physical disaster—to keep the discussion in material limits. As a matter of fact, the most serious offense is against the ethics of a profession. If such advertising is tolerated, the profession becomes a trade, and while trades are entirely honorable within their sphere, they have never sought to assume the same status as the professions, and like the problem of virtue as between the sexes, there is a difference in the demands made upon the two. Continuing the simile, the man should be as virtuous as the woman, but such is not generally expected of him. The tradesman should be as high-minded in his service as the practitioner of a profession, but such is not expected, and neither is there the opportunity. The item follows:

"The State Medical Association in a half-page ad in the Austin American, Monday, announced that they, coöperating with the State Board of Medical Examiners, were beginning a 'campaign of public education' on medical subjects, complaining 'that the public mind has been confused and misled by the numerous fads in medicine * * *' and 'in order to present positively known facts and to clarify the atmosphere * * * the legalized medical profession is entering upon this campaign.'

"It has for years back been considered unethical for a medical doctor to advertise, just why, the writer confesses ignorance. A mechanic learns how to correct the defects in machinery and advertises the fact that people may know where to get his services; the manufacturer learns how to make his wares and advertises so that persons desiring his wares know where to get them, but when a doctor discovers a remedy for some disease or some effective treatment, he remains silent and people are kept in ignorance of the discovery or of the doctor's skill, because it is unethical to advertise, and many poor sufferers who need his services never hear of the doctor or his remedy.

"Now, the doctors find that the public is drifting to 'theories' and 'fads,' if you please, which are advertised, and they, too, must now resort to advertising to bring it back. You may call it 'educational campaign,' but it is advertising, pure and simple. It was advertising which started the public on the new lines, and it will take advertising, and lots of if, to turn them back, if they ever turn back. It was advertising that made people drink more Coca Cola than any other drink; it was advertising that makes more than 50 per cent of the car owners drive Fords; it was advertising that built the Wrigley Building in Chicago, and the time has come when all business, large and small, must depend upon advertising or meet with failure."

The following from the *Temple Telegram* is rather long for reproduction here, but it is a typical discussion of the attitude of the lay press towards the campaign, and the grasp of the press of its purposes:

"The high purpose and broad humanitarianism of the campaign which is being conducted under the auspices of the State Board of Health and the Texas

State Medical Association in the interest of public health, should appeal to every thoughtful citizen as a movement worthy his cordial commendation. The campaign is being waged against fakes, fads and frauds which threaten to undermine health and endanger life. The cost of the campaign is being borne by the doctors and some of the most distinguished practitioners in the State, physicians and surgeons, whose fame and character are known and respected throughout the whole country are giving freely and unselfishly of their time and talent to the task of enlightening the public on 'How to Keep Healthy.'

"That there is need of this campaign at this time is demonstrated by the evidence produced by these doctors in their addresses to the people and by the known broadening use of concoctions which have been shown to be deleterious and even dangerous to health and life.

"The medical association, in its earnest desire to reach and advise with the people as to the menace with which the health of the country is threatened, has resorted to the most effective agency through which public attention can be reached, the press. The publicity used is of the highest character—plain, direct and emphatic, and indicates the growing appreciation of the medical profession of the old school for this means of communicating with the people in matters of public concern; and health and life, admittedly, are of gravest public concern and importance.

"The evils against which the medical association and State Board of Health are waging war, use the newspapers and other recognized agencies of publicity and exploitation, and through this means have built up the multitude of perils from which the doctors are seeking to save the people. The mission of the doctor is not alone to cure, but to warn and advise, and this phase of his duty and obligation to the public is being stressed in this campaign, and it is this feature which affords to the lay mind the most convincing evidence of the sincerity and unselfishness of the distinguished medical men who are giving their efforts to the campaign. They are trying to tell and to show the people how to 'keep well,' rather than 'how to get well' after having fallen ill.

"The newspapers of the State are giving cordial coöperation in this work, and in this coöperation these agencies of publicity demonstrate with force equally as convincing as that of these medical men their sincerity and unselfishness, because in the matter of immediate financial revenue the newspapers receive liberal contracts from sources not recognized in the code of ethics of the medical association, but entitled to equal hearing so far as channels of public information are concerned.

"A pleasing feature of the campaign and of recent actions by the medical profession in its organized capacity is its recognition of the value of the coöperation and helpful willingness of the newspapers in all movements for the public good, and this may be taken as presaging the breaking down of barriers which tradition and practice have erected between the medical profession and the general public."

The *Marshall Morning News*, in addition to publishing a gratifyingly full abstract of our address (which the other local paper, the *Marshall Messenger*, also did), made the following pertinent observation, under the caption, "Why the Faker Gets By":

"In talking with Dr. Holman Taylor, one of the leading members of the medical profession in Texas, who is delivering lectures in order to enlighten the public regarding the science of medicine, the editor was given a little piece of information that comes nearer accounting for the success of medical fakirs than anything we have ever heard. The doctor says that nature has so provided for the perpetuity of the race that no matter whether any treatment is given or not that 65 per cent of the people attacked by disease will recover. Therefore, the medical faker may go out and practice with bread pills and be assured that the majority of his patients will recover.

"And like the gambler who tells only of his winnings and is silent about his losses, the charlatan in the medical profession can point with pride to the recovery of 65 per cent of his patients and remain discreetly silent about the 35 per cent who either died or were not cured.

"With that percentage in his favor it can be easily seen why so many frauds and fakers prey on the public 'who are sick and need a physician.'"

There are other items of equal interest, but these will suffice for the purpose in hand. It is hoped that our members will read these quoted items, for the reason that they indicate clearly what the press thinks of our campaign, and incidentally contain information that some of us need to have in regard to our own obligations.

Counter-Offensive of the Christian Scientists.—Hardly had our educational campaign gotten under way before the christian scientists began their counter-offensive. We have heretofore had great respect for the propaganda organization of this sect, but it seems there has been some considerable deterioration in late months—either that or the newspapers are refusing to be used for such unworthy and dangerous purposes. We have several clippings of this character. We probably do not have all that appeared, but an effort was made through one of our clipping bureaus to get them. If what we have is the harvest, no very great harm has been done, and it would appear, indeed, that the "Committee on Publication" is losing its standing on the range.

The clippings divide themselves into two classes, both evidently put out by our erstwhile antagonist in the State Legislature, one "Brigman C. Odom, Committee on Publication, 603 Exchange Building, Dallas, Texas." One of them is a quotation from the "Report of the Secretary of the Citizens Medical Reference Bureau (226 West 47th Street, New York City), and the address of the President of the Bureau at the annual meeting on June 2." The other is a quotation from an editorial published in the *Christian Science Monitor*, June 2, 1924, which appears to be founded upon the pronouncements of a "Citizens Union of New York." Just what these delectable organizations are would constitute an interesting story in itself, but we haven't time for it now. The clippings run

about a full column each, and contain the usual misinformation and distortion of facts. In some of the newspapers this propaganda was accepted as advertising matter, but in others it was evidently (unless the newspapers containing them violated a state law) printed *gratis*. It would be interesting to know just which of the newspapers publishing this material charged for it and just which of them printed it free, and of the latter, just which published the material because they were under the necessity of doing so by virtue of the influence of christian scientists, personal or financial, or because of their sympathy for this misguided religious sect. But that will be for consideration at another time.

It is hardly desirable to either publish or discuss this counter-propaganda to any considerable length. It is sufficient to say that in these two items all doctors interested in the public welfare are "political doctors," the medical profession is a "medical trust," efforts towards protection of the public health become "State Medicine" (which is as bad as "State religion"), efforts at public health legislation are "raids on legislatures" (which is "a menace to vital liberty," which in turn means the control of one's own body), epidemics are "diseases which never existed," the epidemic of foot and mouth disease in California was an "artificially fermented panic," in which "the cruelties perpetrated upon defenseless animals in the name of medical science almost baffle description," the examination of school children is a "professional movement for class profit," and "a means for the creation of the privilege of an autocratic class," and so forth and so on. Perhaps it would be well, after all, to quote a paragraph from each of these clippings. The following is from the Citizens Medical Reference Bureau item:

"Time and space forbid cataloging the various attempts now being made to bring the public into subjection to the medical trust. The latest, most audacious, and by far the most injurious or dangerous attempt, now in vigorous progress, is to get control of the children in the public schools, by means of physical examinations, lectures on disease, the vogue for throat operations, and the purely experimental injection of vaccines and serums into healthy children. The trust has already had some success in inducing boards of education to give the agents a free hand; so that no time is to be lost if this reprehensible program is to be checked. The ostensible purpose of the doctors in this campaign is to check disease, but by implanting the fear of disease works the contrary result. Any modern psychologist will tell you that to spread the thought, fear, and the expectation of disease, is to spread the disease itself. Every school lecture on goitre, cancer, diphtheria, scarlet fever, smallpox, tuberculosis, etc., etc., is simply broadcasting a seed calculated to bear a crop for medical practice. To submit our children to this blind and barbarous experimentation, which is for no purpose but for the gain of the political doctors and the medical trust, is reprehensible in the extreme."

From the *Christian Science Monitor* item we get the following:

"No more cruel and criminal perversion of the power to sway the public mind could possibly be imagined than this effort of doctors of a certain sort to spread broadcast that fear and apprehension which itself is a most certain cause of disease. It is a peculiarly insidious evil power which is thus exerted. Presuming upon the possession of special and esoteric knowledge conceded to them by the public mind, conspirators of this character strive to inspire a panic which they profess that they alone have the means of dispelling. It so happens that in the New York case which we have cited, politics has come in, and those who are antagonistic to the political forces on whose side were arrayed the health officers profiting by the appropriations, have made it their business to expose the conspiracy. But it is a conspiracy too wide to be contained within the political field alone. It has not been limited either to New York or to California, where the most glaring instances of it have recently been presented. It is a continuous conspiracy manifested at all times and in all places by the constant pressure for Schick tests, compulsory vaccination and health examinations generally to be imposed upon children before they can enter the public schools. It is a professional movement for class profit, which is, of course, a complete negation of the fundamental liberties of citizens; but more than that, it is a means for the creation of a privileged and autocratic class, upholding its power and fattening its purse by preying upon the fears of the people."

Can it be possible that any intelligent layman who has within his acquaintance or who has ever patronized an honorable physician, or knows anything of medical science, could be misled by such prattle as this? Is it not rather true to the contrary that friends will be made for scientific medicine by such propaganda? It is not out of the question that the charge that commercialism prompts the medical profession in urging frequent physical examinations and in insisting upon the use of vaccines and serums, would be heeded, but where is there an individual outside of the ranks of the christian scientists who would believe for a moment that any one could be scared into cancer, diphtheria, smallpox and the like, by discussions of these diseases? It would be easy to offset the believable part of this propaganda, namely, that there is commercialism in physical examinations and the administration of serums and vaccines, with the easily demonstrated fact that there is more money in the treatment of a disease than there is in its prevention. It would seem unnecessary to disabuse the mind of any individual who really believes it, of the belief that there is no such thing as disease, although it might be a benefit to the public at large to switch these people on to some other and less dangerous fetish.

The items we have been discussing appeared, one or the other, or both together, in the following publications: "McAllen Press," "Houston Chronicle," "Iredell Press," "Sherman Chronicle," "Slaton Radiogram," "Jayton News," "Austin American," "Forum Advocate" (Austin), "Crawford Advance," "Fort Worth Record," "Galveston News," "Paris News," "Lufkin Courier."

Defending the medical profession in its efforts, the *Sabinal Sentinel* published nearly two columns of very pertinent and convincing argument. The editor had heard one of the lecturers and quoted quite liberally therefrom. He very pertinently concluded with the following remarks:

"Does that have the least semblance of a 'professional movement for class profit, a means for the creation of a privileged and autocratic class, upholding its power and fattening its purse by preying upon the fears of the people?' as some of the cults who are opposing the campaign of the State Medical Association would have us believe? One of these cults, in forwarding The Sentinel about fifty dollars' worth of advertising which they wanted us to run for them free, is possessed with a Pharisaical spirit to say the least, when they point out the deadly conspiracy of Texas doctors to bind and gag the public so that it will docilely take pills from their hands as readily as a boy will embrace an ice cream cone on the Fourth of July, by speaking of its own immaculate public relations policy as exemplified in its 'Citizens Medical Reference Bureau,' which is maintained in New York City. It says: 'The work of this Bureau is purely educational. The press of the country is in a position to serve the public by an increased use of our communications. Our statements are always verified, and our language dignified and parliamentary. Reliable information, in the form of bulletins, pamphlets, and multigraphed statements are being furnished to educators, legislators, and the press throughout the country. Special information has been compiled for use at legislative hearings, and before boards of education.'

"Sounds like a pretty well oiled piece of machinery itself. If the Texas Medical Association is putting out propaganda for 'fattening its purse by preying upon the fears of the people,' it has a contemporaneous school of 'healers' who would gladly step into their shoes, IF—judging from its own description of its 'educational bureau.'"

The Texas Anti-Opium Publicity Board[1] is the name adopted by a group of Texas workers against the narcotic evil. It is intended that this board serve as the clearing house for information concerning this work, and for the distribution of influence and funds where they will do the most good for the cause. It is supported at the present time by numerous organizations, among them we note the Parent-Teachers Associations, American Legion Auxiliary, Federated Women's Clubs, Rotary, Kiwanis, Lions, Conopus, and others. Just how close the alliance is between these organizations and the aforesaid Anti-Opium Publicity Board, we cannot say. Quite probably it is not a very compactly knit organization for the present. However, numerous of its supporters are very much in earnest, and judging from their literature and efforts our belief is that they are approaching the problem from a common sense, practical viewpoint. For the present the intention is to secure a million signers of a petition directed to the International Opium Conference (to be held in November of this year), denouncing the unrestricted production and sale of opium, and urging an international agreement that the plants from which opium is made be totally extirpated, except for the production of opium in such quantity and of such character as may be required for the alleviation of suffering—the best medical opinion of the world being taken as a guide.

It is this movement which the House of Delegates at San Antonio last May endorsed by resolution (Page 129, June JOURNAL). We are bring the matter thus prominently to the attention of the medical profession of Texas in order that the movement under its present guise may be identified, and in order that the medical profession may know whether to extend or withhold support. There is so much opportunity for misguided effort and contrary action in this most confusing and little understood field of human welfare work that doctors are becoming, in increasingly large numbers, suspicious of any and all movements of this sort. That something should be done to curtail the narcotic evil is clear, but it is not clear that anything should be done to inhibit the medical profession in its efforts to relieve suffering humanity. Whatever our sympathy may be for the unfortunate addict, it is more pronounced for the sufferers who are not addicts. We are impatient with the reformer who would handicap the balance of humanity in order to aid these unfortunates, who, after all, constitute an insignificant minority. We have closely approximated the limit in that particular now, both in the matter of narcotics and alcoholics, and we are in grave danger of so disturbing the situation as to undo the considerable good we have already accomplished. The reformer may soon reach the point the wildcat reached when he was after the negro who had lost his gun. He had forced the negro far out on a limb overhanging a high cliff. The negro very feeling remarked, "Look here, wildcat, ef you comes one inch furthah yo' gwine to haf to jump a long ways to git yo' supper."

1. P. O. Box 478, San Antonio, Texas.

The Educational Campaign Must Succeed

ORIGINAL ARTICLES

LEGG'S DISEASE, WITH THE REPORT OF A CASE IN ADULT.*

BY

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An obscure affection of the hip-joint in childhood has been discussed under numerous names, such as: Perthes Disease, pseudo-coxalgie by Calvé, osteochondritis dessicans, osteochondritis deformans juvenalis by Perthes, quiet hip disease by Taylor and coxa plana by Jansen. Later Dr. Legg described it under "Osteochondral Trophopathy of the Hip-Joint" and flattening of the upper femoral epiphysis. It is evident that there are too many synonyms for this ailment of the hip-joint. If the profession insists on attaching a proper name to it, no better name could be found than that of the father of this disease, our Dr. Arthur T. Legg, of Boston. It will be recalled that Dr. Legg reported the first five cases of this disease before the American Orthopedic Association in June, 1909. Still, some of our contemporary authors persist in coining this malady after Perthes, despite the fact of their own admission that Perthes described it under "Osteochondritis Deformans Juvenalis," in 1913, long after Legg's paper on "An Obscure Affection of the Hip-Joint" was read in 1909 and published in February, 1910, and also long after the publication of the ten cases of Jacques Calvé under "Pseudo-coxalgie" in July, 1910. Since then, innumerable articles concerning this affection have been published, but its true etiology is still clothed with mystery in the depths of a sharp division of opinions and many theories.

THEORIES AS TO ETIOLOGY.

Legg, in his original paper on this obscure affection, advocated that trauma might be responsible in the production of the disease. In later publications he rallied to his "traumatic theory," this time armed with the research work of Lexer and Waldenstroem on the anatomy of the circulation in the long bones. Thus, trauma would cause a circulatory disturbance in the upper femoral epiphysis with consequent atrophy of the epiphysis through diminished blood supply, and hypertrophy of the neck of the femur through increased blood supply due to blocking of the circulation at the epiphyseal line. His own seventy-five cases were grouped into three classes, of which 25 gave a history of insidious onset without any apparent etiological factor; 26 gave a history of a distinct trauma preceding the limp and 24 showed the condition after reduction of a congenital dislocation of the hip.

Calvé's theory is that "coxalgie" is an early rachitic condition which deformed the osseous structures of the hip-joint. This theory has met with very little support on account of the lack of rachitic manifestations, locally or generally. Calvé found rickets in his ten cases.

Allison and Moody reported eight cases in 1915. These authors are of the opinion that osteochondritis deformans juvenalis is a disturbance of the line of epiphyseal growth, and that it depends for its typical development upon changes in the circulation which destroy the nice balance that exists between the metaphysis and epiphysis in growing bones.

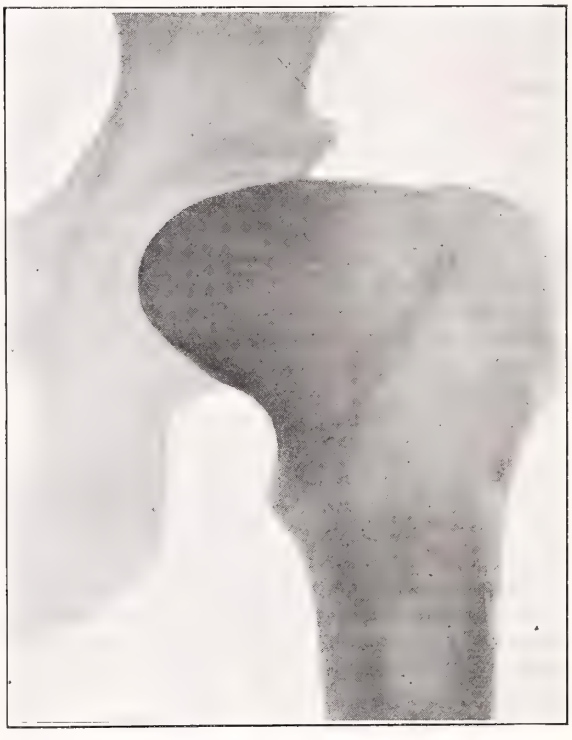

FIG. 1. Legg's Disease in the Adult. Right hip, showing remnant of femoral head in form of a cone-like structure in very shallow but thick acetabulum. Neck markedly hypertrophied and at right angle with diaphysis. There are several rarefied areas simulating cysts or vacuoles. Great trochanter not distinct.

Delitala, in a paper in 1915, says that the origin of the disease is congenital alteration, either of the epiphyseal cartilage or the epiphyseal nucleus of the upper end of the femur. There are, however, a number of cases on record where the epiphysis is known to have been normal before the flattening occurred.

Kidner, in a paper in 1916, took the position that osteochondritis deformans is a mild hematogenous infection of the neck of the

*Read before the South Texas District Medical Association, Galveston, April 10, 1924.

femur at the epiphyseal line. In a recent discussion of this disease he concluded by saying, "The cause of this process may be any one of many things, such as trauma, infection, or nutritional disturbances."

Frieberg argues that the affection is of infectious origin, possibly from the tonsils. In a recent discussion he seems to agree with both Legg and Kidner in saying, "The factors producing the condition may be trauma in one case and infection in another." He sees similitude in it to Koehler's disease of the scaphoid and the infraction of the second metatarsal bone.

Phemister in a discussion on this disease before the American Orthopedic Association, in 1922, states that his cases support the contention that the primary lesion may be epiphysitis of the head of the femur, and that the subsequent changes are secondary to a breaking down of the bony center and collapse of the cartilaginous head.

The last theory is that presented to the American Orthopedic Association in 1922, by Dr. Murk Jansen, Leiden, Netherlands. The minute research of this painstaking investigator shed a distinctly different light on this subject. Careful study of his own cases and others showed that besides the phenomena in the head and neck, the socket presented characteristic changes. "Thus," says Dr. Jansen, "we found a socket which is too shallow, or a socket which is too wide, due to the fact that the ischium is swung medially over a few degrees so that the ischial part of the acetabulum is displaced medially—a condition we term ischium varum. These changes in the acetabulum alter the mechanical conditions in the femoral head and neck and of these mechanical changes the development of the symptoms of coxa plana will seem to be the natural results."

Thus, the prodigious discussion on this malady has developed several theories concerning its etiology. The views held by Delitala and Calvé have not been corroborated by others. On the other hand, Legg's traumatic theory is the most acceptable either in toto or in part. Infection, however, has to be considered a strong and possible factor. The question is whether trauma causes the appearance of those structural phenomena in the femur through blocking of the circulation at the epiphyseal line by the damage incurred at that juncture. No such phenomena have been reported, complicating cases of dislocation of the upper femoral epiphysis. Dr. Legg does not explain why hypertrophy of an osseous structure should result from the mere increase of the blood supply at a time when that particular structure is at complete rest or disuse. The mechanical theory of Jansen appears to be in conformity with the laws of bone hypertrophy and atrophy in that it argues that the changes (the transitional stages) in the femur are resultant from those in the structural abnormality in the acetabulum. Through this theory one would assume that the hypertrophy of the neck and the atrophy of the head are consequent on the architectural changes in the osseous trabeculation caused by alteration of the direction of the weight thrust similar to the

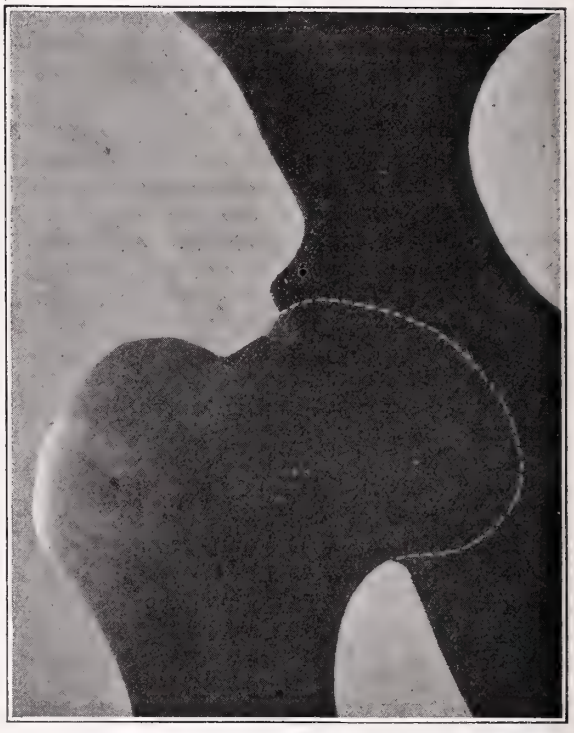

FIG. 2. Legg's Disease in the Adult. Femoral head of "mushroom type." Neck very short and slightly hypertrophied with axis almost normal. Note distinctness of great trochanter and its relation to the head. Acetabulum very thick and shallow. (Compare with Fig. 1.)

histological changes in the neck of the astragalus in deformed feet.

SYMPTOMATOLOGY.

The symptoms of the disease vary in intensity from a mild degree to a considerable severity. While the writer was an intern in the Massachusetts General Hospital, a child was admitted for hip trouble. He had complex symptoms that were neither typical of tuberculosis nor of virulent infection. Dr. Smith-Peterson cut down on the hip-joint which was found to be healthy in every respect. Contrary to the *x*-ray we found the head in good form, unfragmented. A small wedge was taken from the neck of the femur and the fluid from the intracapsular and intracartilage was cultured. Both bacteriological and microscopical reports were

negative. The age of incidence is characteristic, usually between the ages of 5 and 10 years. Legg's youngest patient was $2\frac{1}{2}$ and the oldest 12 years of age. The first noticeable symptom is limping of about 4 to 6 months' duration. Pain is present but is variable in degree and there are no night cries. There is no shortening. There is marked limitation in abduction, slight limitation in internal rotation and slight capsular thickening and muscular atrophy. There is generally no spasm, but Trendelenburg's sign is positive. The great trochanters are moderately prominent and above Nelaton's line. The Pirquet and Wassermann tests are negative. The *x*-ray of the hip joint is characteristic, showing the epiphysis either caplike or mushroom shaped, and it is the decisive factor in the final diagnosis of the case (Fig. 2.)

REPORT OF A CASE IN AN ADULT.

The report of this case forms the basic element of the paper. It was induced by the unusual roentgenological findings met with accidentally, though it may be remarked that the physical examination pointed towards some abnormal condition in the hip-joints. The history of the case is very indefinite and masked.

The patient, S. J. C., 35 years of age, had enlisted in the U. S. Army in 1917, with about seven months' service in France. His family history was negative. He had had measles, pertussis and chickenpox in childhood. About twenty years ago he had rheumatism in the right hip. He was only in bed for a short time, but pain, which never was severe, lingered in the hip for several months. At the time I saw the patient he complained of dull, aching pain in the left hip, but there was no limping or swelling of the hip. Examination showed that the patient was well developed and well nourished. He walked with a very good gait. There were no stigmata of either hereditary or acquired disease. The left hip showed no swelling, redness or tenderness, no pain on motion, and no muscular atrophy, apparent or by measurement. Trendelenburg's sign was absent. The great trochanters on both sides were above Rose-Nelaton's line. Both hips showed limitation in abduction and in internal rotation, but no shortening. Examination showed that both hips were alike, although patient complained of the left hip only. The blood Wassermann was negative, the leucocyte count normal and urine negative. The radiograms showed both hips deformed (Figs. 1, 2). However, there was a distinct deformity in each joint, which points to the difference in the forces that underlie such deformities. If the "traumatic theory" unmodified be true, at least so far as this case was concerned, the injury to the epiphyseal circulation is expected to show symmetrical deformity. This, however, was not the condition in this patient. The "mechanical theory," on the other hand, tends to explain such disparity by the morphological alteration of the acetabulum that is exerting weight pressure on the femoral head. The femoral changes are secondary to those in the socket, and in their manifestations they are dependent on the mechanical forces. By comparative study I have noted that the radiogram of the left hip in my case presents similar features to that reported by Legg (Fig. 10, *Surg. Gyne. and Obst.*, March, 1916).

The treatment of this disease in childhood consists of supportive measures to the affected hip. During the acute stage and when the symptoms are severe, complete immobilization is necessary. In the mild stage, a flannel spica usually gives sufficient support; otherwise, plaster immobilization is used. The course of the disease is from 6 month to one year. The damage incurred by the osseous structures is permanent as shown by Legg's classical early cases and this reported case.

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KERATOCONUS WITH DEMONSTRATION OF CASES.*

BY

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Keratoconus is known by several other terms, such as conical cornea, hyperkeratosis, staphyloma pellucidum conicum, conical hydrophthalmia, and others. It is one of several forms of ectasia of the cornea. One author has defined it as, "An anomalous condition in which the central part of the cornea loses its normal convexity and assumes the shape of a cone." It is unaccompanied by any inflammatory condition. In the beginning stages there are no changes in the substance and transparency of the cornea, but as the protrusion increases there is considerable change in the corneal substance and loss of transparency at the apex of the cone, so that there is later a central opacity and a high degree of mopia, which seriously interferes with vision.

Conical cornea is a rare condition. It is more common in females than males. It has been observed that females who have keratoconus are chronic sufferers from menstrual disturbances such as dysmenorrhoea and menorrhagia, and that they are also subject to dystocia and puerperal hemorrhages.

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, April 30, 1924.

Just why this is so or what the connection is, no one seems to know, but it is a matter of clinical experience. Keratoconus is usually bilateral, the condition being more advanced in one eye than in the other. The apex of the cone is usually a little below the center of the cornea. The length of the cone varies from a slight protrusion to ¾ of an inch long.

HISTORY.

The first case we have any history of is one observed by Demours of Paris in 1747 and later printed in a French medical journal. In 1802, Scarpa of Paris reported a case coming under his observation. Pickford of Dublin, in 1843, gave a description of some cases he had observed and treated. Noyes of New York reported, in 1892, an extreme case of keratoconus in which the cone measured 3/4 of an inch long. Since this condition was first recognized and reported by Demours, it has been observed and studied by ophthamologists up to the present time. Among those who have studied its etiology and pathology and who have instituted various therapeutic means for its relief are such great names as Von Graefe, Bowman, Axenfeld, Knapp, Fuchs, and others.

SYMPTOMS AND DIAGNOSIS.

The disease is made known to the patient by interference with vision. The eyes become increasingly myopic and astigmatic so that all objects have to be brought very near in order to see them at all. This condition of compound myopic astigmatism may progress to a degree in which it is almost if not impossible to have properly correcting lenses ground. Conical cornea is seldom recognized in childhood and it usually develops between the twelfth and twentieth years. When the subject is viewed in profile, it is usually easy to make a diagnosis. On looking directly at the patient, the eyes are observed to have a peculiar, sparkling, diamond-like brilliancy. Some have likened this lustre to the sparkle or twinkle of large dewdrops in the early morning sunshine. With the retinoscope there is noted a very small reflex at the center of the cornea, which is surrounded by a dark circular shadow or umbo.

Ophthalmoscopic examination of the fundus in advanced cases is unsatisfactory, the image being so distorted by the conicity.

ETIOLOGY.

The precise mode of development of conical cornea has not been definitely determined. It is considered congenital like myopia and keratoglobus, as it is found in members of the same family and their descendants. Swanzy says, "The condition is due to gradual and slowly advancing atrophic processes in the cornea at or near its center, in consequence of which the normal intraocular tension acts on it so as to distort it into conical form." It is due to congenital weakness at the center of the cornea or to chronic degeneration of the membrane of Decemet. The apex of the cone is often reduced to one-third of the normal thickness. Salzmann, in 1908, reported in Von Graefe's Archives of Ophthalmology his histological findings in an eye affected by conical cornea. His description is so accurate and so applicable to any case of conical cornea that it is quoted here verbatim:

"The gaps in Bowman's membrane due to the thinning are filled with a peculiar connective-tissue, distinguishable from the corneal stroma, and containing elastoid fibres like those found in pinguecula. The same tissue in places passes before and behind the intervening portions of Bowman's membrane so as partly or completely to embrace them. The deeper layers of the corneal stroma in the region corresponding to the summit of the conus (and the thinnest part of the cornea) present some tendency to splitting, with the formation of lacunae longer than those in the normal stroma. Irregularity of nuclear division is also found in this part of the cornea. In the region of the ectasia, and practically at the center of the cornea, there is a considerable gap in Decemet's membrane. The free edges are elevated from the corneal stroma, and the endothelial cells have grown round on their anterior surface. These cells show granular and other changes.

"The peripheral parts of the cornea have the normal thickness, and thus contrast with the ectasia in which the thickness of the cornea is reduced by about a half. In the temporal half of the cornea there is a defect of Bowman's membrane, reaching from the margin of the conical part to the edge of the cornea. In this area it is replaced by a fibrocellular tissue somewhat resembling an avascular pannus. The epithelium rests upon a fine homogeneous membrane which gives the coloring reactions of fibrillary connective tissue. The posterior surface of Decemet's membrane is covered with a thin layer of connective tissue, and, towards the margin of the cornea, between this and the endothelium, there lies a second homogeneous glassy layer.

"Other changes in the eyeball, having no direct relation to the corneal anomaly, are classified as anomalies of development and acquired pathological changes. The trabeculae of the ligamentum pectinatum are thicker and the spaces narrower than the normal. The sclera reaches its maximum thickness at the equator, and is thicker on the temporal side than on the nasal. The ciliary muscle is of the myopic type. Granules like those found in the cells of Decemet's membrane, are also present in the nonpigmented layer of the pars ciliaris retinae. The lens is cataractous and shrunken. The anterior capsule is wrinkled, and there is a thick anterior capsular cataract."

PROGNOSIS.

No one can foretell to what extent keratoconus may develop nor at what stage the process may come to a standstill. There is not much hope of its getting better spontaneously; the probability is that it will get worse—and may do so even in spite of any

and all therapeutic measures. However, if the patient comes for treatment early enough and is made to understand the seriousness of the condition and follows the instructions of the oculist, he may hope to retain useful vision.

TREATMENT.

Success in the treatment of keratoconus depends very much upon the intelligent cooperation of the patient. The patient should be advised in every way possible how to protect the eyes. He should not be allowed to follow a profession or business requiring the use of the eyes for near small objects such as a tailor, writer, student, teacher, etc. Treatment is both medicinal and surgical. The medicinal treatment consists in the use of astringent collyria and a miotic such as eserine, either with or without a bandage, and also in the administration of tonics and alteratives, such as iron and iodine.

The surgical treatment consists in the correction as far as possible of the high refractive error with appropriate lenses. These patients should be re-refracted often in order to keep up with any changes that may be taking place in the dioptric media. Excision of the apex of the cone has been practiced with some success. Extraction of the lens has been attended with good results, especially in cases when the myopia is around minus 10 or 12. Repeated discissions have yielded good results in the younger patients. Cauterization of the apex of the cone by the electric or actual cautery which, as in excision of the apex producing a flattening of the cornea, has been done with good results. But after either of these procedures there is a central opacity of the cornea, necessitating an optical iridectomy afterwards in order to get the best results.

It is the opinion of the writer that when operative treatment becomes necessary, cataract extraction offers the best results, as is demonstrated by one of the cases herewith presented. If the lens is clear, however, I believe the operation of choice is to make a corneal incision with the Graefe knife, as for a cataract, followed by a broad iridectomy and the removal of a strip of cornea along the central edge of the wound. Pressure dressings are then applied and atropin is instilled.

Case No. 1.—H. B., aged 28 years, a widow with three children, was always troubled with dysmenorrhea. Her labors had been long and difficult, and she had had hemorrhages after each labor for about three months. She had worn glasses since her ninth year. She gave a history of bad eyes on her father's side of the family, but didn't know what particular kind. She had a half brother almost blind in the Institute for the Blind at Austin. She suffered with bad headaches when a child, and occasionally had severe pains in her eyes when tired. She did not know the real trouble with her own eyes, but saw quite indistinctly and knew she was very nearsighted.

Examination of her eyes showed: O. D.=20/100; O. S.=20/1000. She was wearing the following correction: O. D.=25—5.50×45; O. S.=4.00×165. Her vision was very much improved by the following prescription, which showed that the myopia was increasing: O. D.=.75—5.50×45; O. S.=1.00—4.00 ×165.

Ophthalmoscopic examination in this case was very unsatisfactory. Deposits of pigment were dimly seen here and there on the fundus and intervening white streaks.

Case No. 2.—A. M., a girl, 24 years old, was both mentally and physically defective from birth. There was a pronounced ectasia of both corneae, which was probably congenital. On April 8, 1924, there was a corneal ulcer in the right eye, the one having the greatest protrusion. These ulcers are, by the very nature of the case, difficult to heal, and if the eyeball can be saved, at least some corneal opacity may be expected. The patient is very highly myopic, but it is impossible to ascertain the exact degree, as she is very unruly and does not have sufficient mind to coöperate with the refractionist.

Case No. 3.—Mr. E. A., of Mason, Texas, aged 60 years, gave the following history: His father was blind several years before he died, but he did not know the cause of the blindness. He had two sisters whose eyes showed high degrees of myopia and which were possibly caused by keratoconus, as the vision of one was especially bad.

The patient's left eye had always been very bad and he had been myopic in the right eye all his life. About one year before he came to our office, he detected his vision getting much worse in the right eye.

On examination, November 15, 1921, we found a keratoconus of both eyes, complicated with cataracts. In the left eye the defect was so bad that an operation for removal of the cataract was not thought advisable. In the right eye he had good perception and projection of light and the keratoconus was very much less marked. The following day, the cataract was removed from the right eye with excellent results. His vision is now 20/60 without the use of the lens and he is able to read Snelling's .50, or his smallest near type, without the use of a lens, which shows that he has a fair accommodation without the presence of the crystalline lens.

ABSTRACT OF DISCUSSION.

Dr. W. R. Washburn, Cleburne: Keratoconus is rarely seen, but we have to deal with it when a patient suffering from it comes to us. The etiology is somewhat a question of speculation. Various systemic conditions seem to be associated with it, such as debilitating illnesses of various kinds. However, these conditions are found in thousands of others who do not have the eye conditions under discussion, which leaves some doubt as to whether these are actual causative factors. De Schweinitz says that keratoconus is rarely congenital and often develops about the age of puberty. I have wondered whether softening of the cornea takes place at this time, causing stretching.

The retinoscope shows a small central light reflex with a dark circle around it. This is due to the fact that the rays striking the periphery of the cone are reflected from the eye on account of the acute angle of incidence, instead of being refracted into the patient's eye. Myotics may in some cases sharpen the vision by contracting the pupil, thus

lessening the dispersion of refracted rays due to the variable curvature of the cornea.

Dr. Louis Daily, Houston: I had the pleasure four years ago, of seeing Dr. Fox of Philadelphia, operate on a case of keratoconus. The condition was so pronounced that the patient could hardly close her eyelids and she was entirely blind. The operation in his hands looked very simple. He had then operated on eleven cases. A case was presented in June 1923, in Vienna, where the patient had worn contact glasses and yet had very good vision.

Dr. N. H. Bowman, Waco: I was very much interested in this paper, and also in the discussions pertaining to the possible cause of this condition. In the majority of cases keratoconus, we know, comes on with puberty. However, the cases here presented illustrate the fact that it is sometimes congenital. Failure of development of Descemet's membrane evidently has something to do with causing the changes that occur in the cornea. Impaired nutrition associated with secondary degenerative processes, is a factor usually noted.

POLYCYSTIC DISEASE OF KIDNEY.*

BY

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The basis for this paper consists of the report of three cases which we have had under our observation for several years. The diagnosis of polycystic disease of the kidney was made in Case No. 1, clinically, in Case No. 2, by exploratory operation, and in Case No. 3, only by autopsy, although this diagnosis had previously been considered.

CASE REPORTS.

Case No. 1.—This patient, a male, 44 years of age, a lawyer, had under observation since 1916. He had undergone an appendectomy in 1914 with an uneventful recovery. He came under observation because of pain over the left frontal area, which dated from an attack of lagrippe, six months previously. He was told he had frontal sinus involvement. The pain was very severe at times unfitting him for work. About June, 1916, he began to notice palpitation of the heart and extreme nervousness.

Examination showed a well nourished male. The blood vessels were full and tortuous. His heart showed marked accentuation of the sounds, especially the aortic second sound, but there were no murmurs. The abdomen was negative. Urinalysis was as follows: Specific gravity, 1.006; albumin, negative; leucocytes, a few. Blood examination showed white blood cells 6,100; polynuclears 68 per cent; hemoglobin 85 per cent. Enlargement of both kidneys was noticed in 1917, and they were found to be definitely nodular in 1920 when the diagnosis of polycystic kidneys was made. This patient has been put on a restricted diet such as is usually given nephritic cases. He was allowed to continue his work, but was restricted to only day work. He plays golf, hunts and fishes, without tiring. In November, 1922, he had severe pain in the right renal area, which lasted three days. Otherwise, he has been quite comfortable.

Case No. 2.—This patient, a female, 36 years of age, came under observation, in 1915. Her family history was negative. Her personal history was that she had suffered from sick headaches, nausea and vomiting during menstruation. Her feet and hands were swollen at times, and she has had intermittent attacks of severe pain in the upper abdomen. She also gave a history of urinary frequency, passing small amounts at times, and a large amount at other times. She believed that the pain in the upper abdomen was worse when her urine was scanty.

On examination, her heart shows accentuation of the sounds, especially the aortic second sound. The right kidney was prolapsed; the left, large, tender and prolapsed. The uterus was markedly retroverted. The specific gravity of her urine was 1.010, and there was a slight trace of albumin. The blood count showed: Red blood cells, 4,420,000; white blood cells, 5,000; polynuclears, 64 per cent. On June 24, 1915, her kidneys were explored and bilateral polycystic kidneys were found. The Rovsing operation was performed. On May 10, 1919, an appendectomy and supravaginal hysterectomy were performed. This patient has been seen at frequent intervals with complaint of severe headaches, backache, urinary frequency and dysuria. She is intensely neurotic and has not been entirely relieved by anything we have done. Recently, the patient has been cystoscoped several times by another physician, with no appreciable change. However, she has been able to teach school for the past several years.

FIG. 1. Cut section of right kidney, showing cyst-formation.

Case No. 3.—This patient, a female, aged 53, a housewife, came under observation in 1918. Her past history was negative. She came under observation because of periodic occipital headaches, nervousness and irritability. She had gastric distress after eating, with belching of gas, which came on 30 minutes after eating. There was no history of loss of weight, swelling of extremities, or urinary frequency.

Examination showed a well nourished but sallow colored woman. Her left mammary vein was engorged. The heart sounds were accentuated. The right kidney was prolapsed XX and the left kidney XXX. The liver was two fingers below the costal margin. There were no areas of tenderness over abdomen. *Urinalysis* was as follows: Specific gravity, 1.003; albumin, XXX; white blood cells,

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 30, 1924.

XXX; red blood cells, a few. Blood examination showed: Hemoglobin, 80 per cent; white blood cells, 13,100; polynuclears, 70 per cent; Wassermann, negative. Her gastric symptoms have been much worse since September, 1923, when she had dengue. She lost about fifteen pounds in May and June of 1923, but regained it in August. *X*-ray examination was negative, except for beginning aneurism of aorta. In October, 1923, she began having frequency of urination, and went to another physician who diagnosed bilateral pyelitis, and lavaged the renal pelves. The pyelogram of December 27, 1923, showed large calyces of right kidney, but nothing diagnostic. Following the pyelogram the patient began running fever as high as 102° F. There was marked rigidity and tenderness in the right upper quadrant with less in the back. A mass also developed in this area, smooth at first, but later nodular, which could not be differentiated from kidney or liver. The *x*-ray showed a high fixed diaphragm similar to that seen in a subphrenic abscess. The blood count showed white blood cells 18,000; polynuclears 86 per cent. The urine showed many pus and blood cells.

On January 15, 1924, an exploratory incision was made and drainage instituted. Bloody, grumous material was removed, which showed occasional pus and blood cells. The tube later drained a small amount of uriniferous fluid. The patient developed marked gastric irritability and her stomach would not even tolerate water. She was given tap water for a time and seemed to rally, but then gradually failed, and died on February 11, 1924.

Autopsy report (by Dr. Caldwell) was as follows: The kidneys could be seen through the peritoneum as large tumor masses composed almost entirely of cysts filled with fluid of various shades, from clear and watery to dark brown. The right kidney was about 18 cm. from pole to pole and its upper pole extends upward to the level of the fifth rib. On section, no definite areas of intact kidney tissue were demonstrable. The cysts ranged in size from 0.5 cm. or less to 3 cm. in diameter. Several areas of infection were seen and the drainage tube in the tumor mass. The left kidney was similar to the right, except that it was only about ⅔ as large and in its upper pole a few of the cysts were filled with a sanguineous, purulent material. The liver contained multiple cysts, the larger ones being situated in the left lobe next to its anterio-inferior margin. The largest cyst in this region has a diameter of about 3 cm. The cysts, seen through the capsule of the right lobe, were widely distributed throughout the liver, but were usually less than 1 cm. in diameter. (Cysts were not found in any of the other viscera.)

1. Some believe the cysts are true retention cysts, the result of inflammation. This theory has practically been abandoned.

2. The theory that the cysts were true cystadenomata was held by Namverok, Malassoz, and others. However, this type of cyst rarely metastasizes, and so it is hard to explain the bilateral condition.

3. The commonly accepted theory is that they are due to a faulty union of the tubules. The cysts in the liver and other organs probably result from a similar faulty development. In fetal and infantile cases, other congenital deformities are usually met with. This fact is often offered in support of this theory and of the contention that they are always congenital. These cases are often familial. Crawford has reported 14 cases in five generations of one family. Osler, Borelens, and others, report similar observations.

CHART I.

Blood Pressure		Phthalein	Blood Urea		
Case No. 1—					
June 16, 1916,	180/130	June 2, 1916—15 per cent; 25 per cent	May 9, 1922—	N. P. N.	60
February 17, 1917	180/130	August 8, 1922—5 per cent; 7 per cent		Urea	22.3
January 9, 1920	190/130			Creatinin	3.
Case No. 2—					
November 3, 1916,	160/110	February 10, 1923—38 per cent; 6 per cent		N. P. N.	30 mg.
September 19, 1918,	130/ 90			Urea	11 mg.
March 15, 1919,	140/110			Creatinin	1.25
August 31, 1922,	125/ 90				
September 11, 1922,	140/100				
February 10, 1923,	150/110				
Case No. 3—					
June 12, 1920,	185/ 95	December 27, 1924:	January 4, 1924—	N. P. N.	180 mg.
June 8, 1923,	135/ 90	None in first hour		Urea	84 mg.
June 22, 1923,	160/ 90	.75 per cent second hour			

SYMPTOMS.

Cases of polycystic kidney often go until late in life with no subjective symptoms, and the tumor mass is the first indication of the disease. The most common symptoms are: (1) Pain, usually dull in character but may be colicky, at which time the patient usually has intermittent hydronephrosis; (2) a tumor mass is present in 75 per cent of cases (Braasch) and usually larger on one side. It is always bilateral (Keyes); (3) Hematuria is a frequent symptom, varying from blood cells in the urine to marked hemorrhage; (4) frequent urination and an increase in the 24-hour output over normal has been pointed out by Crawford; (5) symptoms of renal retention, such as increase in blood pressure, palpitation of heart, edema, nausea and vomiting, are present in varying degrees. Clinically, it suggests chronic interstitial nephritis; (6) the phthalein output may be normal but late in the disease it usually drops very low.

DIAGNOSIS.

These cases must be differentiated from hydronephrosis, pyonephrosis, and hypernephroma. If the rounded nodular contour of the tumor mass is palpated, the diagnosis is easy. The history and urinary findings are a great help, and with the presence of

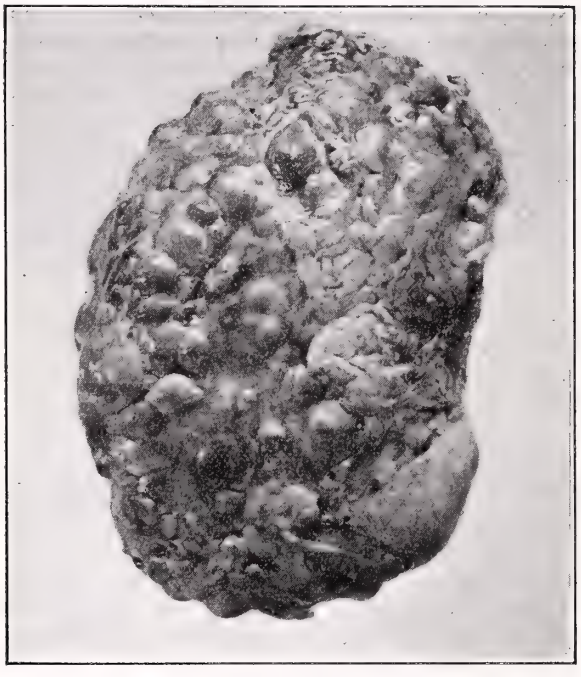

FIG. 2. Left kidney, studded with cysts. (Same case as Fig. 1.)

the bilateral tumor mass make the diagnosis fairly certain. Pyelogram shows a "plug hat" deformity of the calicyces (Braasch), but it is not absolutely diagnostic. Because of the risk of causing death from uremia or infection, I will not pyelogram a patient in whom I suspect polycystic kidneys. The intravenous injection of sodium bromid, as suggested by Rowntree, may give satisfactory pyelograms, but I have not had the opportunity of trying it. Even with all the methods of diagnosis at one's disposal, many cases will go to the autopsy table undiagnosed—as our case just reported. The polycystic character of the mass was not clearly demonstrated and we were unable to decide whether it was the right kidney or the liver. The picture was even more confusing because of the presence of a diseased gall-bladder, which would have justified removal had the patient been a good surgical risk. The *x*-ray was misleading and the pyelogram not diagnostic, although it was suggestive to me. I believe the diagnosis should only be made by exclusion of other possible pathology. Had we been able to palpate the left kidney with its nodules, I feel certain that we would have definitely diagnosed it, but the muscle-spasm and tenderness over the left upper quadrant prevented deep palpation. Hypernephroma will closely simulate it but is never bilateral. Hydronephrosis is usually associated with intermittent attacks of anuria, followed by polyuria and by disappearance of the enlargement between attacks. Pyonephrosis and perinephric abscess are unilateral, and the history is a great aid in these cases. If infection occurs in one of the cysts of a polycystic kidney, however, the picture is most confusing.

TREATMENT.

Rovsing, in 1912, reported 3 cases benefitted by the puncture of the cysts. Lund, in 1914, reported four cases benefitted by the Rovsing operation. Braasch, in 1915, reported 41 cases in 10 of which he had performed the Rovsing operation, with a primary mortality of 2—one dying three years later. Crawford reports one death following the Rovsing operation. In 1919, I saw a case on which Ochsner had performed Rovsing's operation on one kidney two years previously. This patient showed bilateral renal tumor masses and died of uremia following cystoscopy. Autopsy confirmed the clinical diagnosis. Both kidneys and the liver were studded with cysts. Braasch reports 14 cases of polycystic kidneys treated by nephrectomy, with only one primary

FIG. 3. The liver, showing cysts, especially of the left lobe. (A) A large cyst of antero-inferior surface of left lobe.

death. Nephrectomy in the hands of others has been less encouraging—Crawford, Keyes, Cunningham, and others, advising against it. The reason for not performing it is that the condition is practically always bilateral, although one kidney is usually much larger (Keyes). It is generally accepted that nephrectomy is only indicated in cases of severe unilateral hemorrhage or pyonephrosis. In all other cases, because one is dealing with a bilateral lesion, to remove one

kidney would be taking away what little function this kidney may have—and to no avail.

The question of pelvic lavage and of pyelography of polycystic kidneys is frequently raised. It is true that many cases of polycystic kidneys are cystoscoped with no bad effects, but in some cases, especially in those with low renal function, anuria often results. Braasch draws attention to anuria and infection and suggests catheterization of only one ureter at a sitting. Young advocates complete cystoscopy and pyelography. Cabot advises against cystoscopy in cases of low renal function, or where the diagnosis can be made otherwise. I have had one death from cystoscopy and pyelography of a polycystic kidney.

If you look at the temperature record in Case No. 3, I believe that you can draw the conclusion that the fatal termination was hastened by pyelography. There were many old hemorrhagic areas throughout the right kidney, which can easily be explained by the damage done at pyelography. In injecting the left kidney after its removal, the ease with which the cysts were ruptured was very striking. This rupture occurred after injection of 10 c.c. of sodium bromid solution, and with very low pressure. It is easy to understand how this could occur while making a pyelogram and it probably accounts for the severe hemorrhage reported in some of these cases. Binney suggests pelvic lavage as part of the treatment, but I believe that the danger from rupture of the cysts through trauma inflicted by the ureteral catheter or increase of intrapelvic pressure, with subsequent hemorrhage and infection, is far greater than any benefit that could be derived from its use.

It is very interesting to note that the case treated medically has done as well, if not better, than the one treated surgically. Keyes says that polycystic disease of the kidney is clinically chronic interstitial nephritis and should not be treated surgically. I am convinced that the symptoms due to faulty elimination and high blood-pressure can be controlled by rigid routine and diet. It is very important to clear up foci of infection elsewhere in the body and remove danger of infection in the abnormal renal tissue. Violent physical and mental exertion should be forbidden in these cases, as hemorrhage may follow elevation of blood pressure and the resultant increase in intrarenal tension. Rest in bed, free catharsis, and even sweating, is beneficial at times during attacks of pain. Some patients who show an early development of the tumor mass, and who still have efficient renal tissue, as shown by a relatively good phthalein output (40 per cent or better), and in whom the pain is not relieved by medical means, may be subjected to the Rovsing operation. This operation will relieve pain and the renal function will often improve. However, this relief is only temporary and the operation is not without danger.

The two cases that I have observed after Rovsing's operation, showed the return of cysts in the kidneys. Pays, and others, report similar experiences in from one to two years following operation. Case No. 3 was entirely relieved by exploratory puncture and drainage of a large cyst, and I feel sure the end was delayed somewhat by relief of the marked intrarenal tension. But other cysts soon develop and the condition is unchanged. It is remarkable how low the renal function may become and these patients still continue very active and with but few symptoms. Crawford says that many live to ripe old age, but that the majority die in the fourth decade of life. He also points out that the growth is very slow and that cases are rarely seen between infancy and eighteen years. However, many cases are reported in which the patient has died from this disease during infancy.

SUMMARY.

1. These patients can be kept comfortable by rigid routine and proper diet, with removal of focal infections.
2. Cases of good renal function may be helped temporarily by puncture of cysts, but the operation is not without danger.
3. Cystoscopy is not indicated except in cases of bleeding or sepsis, and is contraindicated in cases of low renal function.
4. Nephrectomy is only indicated in severe hemorrhage or sepsis.

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Scarlet Fever Toxin.—Scarlet fever toxin has been furnished by the John McCormick Institute to some city and state health departments. Physicians inquiring for this material should apply to their local health department. There is an increasing demand for standardized toxin that the Drs. Dick believe should be met; however, because the toxin must be standardized on human beings, the commercial companies are going to find it difficult to standardize accurately.—*Jour. A. M. A.*, Aug. 30, 1924.

THE PRACTICAL APPLICATION OF PELVIMETRY.*

BY

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Pelvimetry is one of the cardinal points in the science of obstetrics and the pelvimeter is as essential to the obstetrician as the stethoscope is to the internist. In spite of such accepted teachings among the profession, there is a large number of good physicians who never resort to the routine employment of pelvic mensuration and, consequently, some mistakes have been made which might have been prevented. It has been said, "It's the individual who dies; there is no mass mortality in obstetrics until the records are filed." In any branch of medicine one should not be content with average results, but should employ every means in order that perfection may be approached as nearly as possible. Since it would be impractical to discuss in detail the essentials of pelvimetry, I will limit my remarks to the following topics: (1) General consideration of patient; (2) classification of pelves; (3) significance of individual measurements, and (4) estimation of dystocia.

GENERAL CONSIDERATION OF PATIENT.

Whenever a physician accepts the responsibility of an obstetrical case, it behooves him to throw around this woman every available safeguard so that, in the course of several months, a live healthy child will be delivered with the least risk to the mother's future welfare. Such close supervision of the pregnant woman is designated as prenatal care.

The subject to which my remarks will be limited, concerns the relationship of the pelvis to the child or, in other words, of the passage to the "passenger." In order to ascertain some knowledge of the former, there are numerous observations which one makes, not with the idea of drawing final conclusions, but as an index of what one may expect on further examination. Unconsciously, the size of the patient is observed, but I have found that on accurately determining their height, many patients were much smaller than previously judged. If one has a definite routine to follow, there is less chance of overlooking some finding which may later prove valuable. On such a presumption, I have made it a practice to obtain the height, observe the gait and standing posture, and to examine the curvature of the spine of every patient. Inspection of the tibiae, ribs and forehead often gives a clue as to the existence of rachitic stigmata, the significance of which will be discussed later. The presence of a pendulous abdomen in a primipara is of greater significance than the same condition in a multiparous woman. If there is a history of previous pregnancies, a careful inquiry is made in regard to the duration of labor, size of child, type of delivery, as well as the length of the pregnancy. The value of such information is evident and needs no further discussion unless to reiterate that a careful complete examination is warranted in every case.

CLASSIFICATION OF PELVES.

The history of pelvimetry dates back to 1543, when Vesalius gave the first accurate description of the pelvis, correcting the idea of the separation and the gaping of the pubic bones during labor. Arantius, in 1559, was the first to recognize the existence of contracted pelves, but to Van Deventer, in 1701, we are indebted for our first knowledge of contracted pelves, from an obstetrical standpoint. Litzmann and Michaelis, in 1843 to 1850, laid the real foundation for pelvimetry and it is due to their efforts that we are able to classify pelves. The occurrence of contracted pelves varies according to race and social condition. It has been my observation that fewer contracted pelves are seen among private patients than among the city clinic cases. Let it be clearly understood that the existence of a contracted pelvis does not signify operative interference, because spontaneous labor is the outcome in approximately seventy per cent of such cases. The routine measurements, as you recall, are divided into external and internal.

The important external measurements are as follows: (1) Interspinous (Sp)—The distance between the outer margin of the anterior superior iliac spines; (2) Intercrestal (Cr)—The distance between the outermost portion of the iliac crests; (3) Bitrochanteric (Tr)—The distance between the greater trochanters of the femurs, and the (4) External conjugate or Baudeloque diameter (B. D.)—The distance between the spine of the last lumbar vertebrae and the anterior surface of the symphysis pubis.

Generally speaking, the external measurements alone do not give sufficient information from which to classify a pelvis, but simply serve as an index of the more important internal measurements. Small external measurements lead one to expect correspondingly small internal measurements, but such a steadfast rule does not hold true. Each individual measurement will be discussed in detail later. The internal measurements, accepted as the most important, are

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924.

the index of the inlet and the outlet of the pelvis, and from them the type of pelvis is determined. While the external conjugate frequently gives information in regard to the inlet of the pelvis, this information is never conclusive and cannot be compared with the knowledge obtained by measuring the distance from the sacral promontory to the lower margin of the symphysis pubis. The next most important measurement is the distance between the tuberosities of the ischii. By placing the thumbs over the descending rami of the pubic bones, the character of the pubic arch is ascertained.

Having made such measurements, the problem in the mechanism of labor resolves itself into this: "Can the fetal head enter the birth canal and, if so, can it get out?" Thus it is quite evident why the diagonal conjugate and the outlet measurement are considered the most important. The classification which has proved most helpful to me, and in which every case can be pigeonholed, except the very rare type of pelvis, is as follows:

1. Normal. Arbitrarily, it has been decided that the normal pelvis must have a diagonal conjugate over 11.5 cms. and the outlet measurement greater than 8 cms.

2. Generally Contracted Typical. This type of pelvis is self-explanatory and corresponds to the "justo minor type," with which you are familiar. It is found in small women and rarely causes any trouble unless the child is of excessive size. It is rather the rule for the first child in such cases to be small, the head to engage easily, and cause no trouble; yet, if the size of the child increases with each succeeding pregnancy, it is not unusual for marked pelvic dystocia to occur at a later labor. In this type of pelvis all external measurements are shorter than normal by two to three cms., and the diagonal conjugate is 11.5 cms., while the outlet is approximately 8.5 cms.

3. Flat Pelvis. When the diagonal conjugate is 11 cms. or less, such pelvis is considered flat. I have found flat pelves in large women, quite often of Polish or Austrian descent, and the course to pursue in the care of such a case, has been most perplexing. As a rule, the babies are large. The size of the patient is indicative of a spontaneous normal labor; yet, one is confronted with the cold fact of a contracted superior strait. While the external conjugate rather frequently leads one to suspect the existence of a flat pelvis, only the measurement of the diagonal conjugate is conclusive evidence of flattening.

4. Funnel Pelvis. This type of pelvis is a very frequent finding among the white women of this section, and is often termed the male type. Whenever the outlet measurement is 8 cms. or less, the pelvis is arbitrarily considered funnel, and the pubic arch, as a rule in these cases, will resemble an angle rather than an arch. This type of pelvis, unless quite marked, rarely causes serious trouble. A prolongation of the second stage, even when the head is visible, is very probable, and often necessitates the use of forceps to prevent intrauterine asphyxia. Pituitrin is contraindicated in any funnel pelvis and perineal lacerations occur more frequently, as one would expect. For that reason, episiotomy is quite often advocated. Morse, of New Haven, believes that anterior vaginal relaxation occurs more frequently in parous women with funnel pelves than in any other type.

5. Rachitic Pelvis. The pathological changes due to rickets may involve the entire skeleton, and the bony deformity of a rachitic pelvis is a cause of frequent obstetrical worry. One may find some form of the aforementioned pelvic contractions present in a rachitic patient; however, there are certain outstanding features which stamp the rachitic pelvis. The normal sacrum has two definite curvatures, vertical and lateral, but as a result of rachitic changes, the vertical concavity is markedly accentuated, due to the pressure exerted by the body-weight on the softened bones, thereby causing the first sacral vertebrae to be brought nearer the symphysis pubis. In addition to this resulting change in shape of the superior strait, the lateral concavity is obliterated or converted into a convexity, due to the extension of the bodies of the sacral vertebrae beyond the level of their alae. Occasionally, the body of the first sacral vertebra extends forward more markedly than the others, and its lower margin is felt as a false promontory. The wide flaring pubic arch is easily accounted for when one remembers the mechanical effect of the body-weight on the outlet while in the sitting posture. From these brief remarks one can readily surmise what pelvic complications such changes may cause during labor.

SIGNIFICANCE OF INDIVIDUAL MEASUREMENTS.

Neither any individual measurement in itself, nor the complete measurements in the aggregate, can signify the final outcome of a labor, because the size of the child's head plays a most important role. The cases of marked pelvic dystocia rarely cause much worry in choosing what course to pursue, but it is the lesser degree of contraction or the border line case which taxes our judgment.

Interspinous and Intercrestal. Most text books give the normal measurements of these points as 26 and 28 cms., respectively, but it has been my experience to find them less by 2 cms. in each case. These measurements, as a rule, are of very little significance except when they approach or equal each other, and in such cases further examination will often show the presence of rickets.

The Bitrochanteric Diameter. This can be dismissed by simply stating that it is valueless and a waste of time.

External Conjugate or Baudelocque's Diameter. While this measurement is often considered the index of the pelvic inlet, the evidence furnished is frequently misleading. It is safe to consider any external conjugate of 18 cms. or less, as indicative of flattening, but this should be checked by a most careful measurement of the diagonal conjugate.

Diagonal Conjugate. This measurement is generally conceded to give the greatest information, and yet it is the one most usually neglected. An attempt should be made in every case to determine this measurement unless the head has already entered the superior strait. At the same time the sacral curvatures should be palpated, when possible, and if the diagonal conjugate is 11.5 or less, one should be placed on his guard.

Distance Between Tubera Ischii (Outlet Measurements). As previously stated, when this measurement is 10 cms. or more and the arch is flaring, one has to consider the presence of rickets. On the other hand, any measurement of 8 cms. or less, arbitrarily places the pelvis in the funnel class. In such cases additional measurements are necessary in order to see if trouble is to be anticipated. It has been a frequent occurrence to see a spontaneous easy labor in a case with a very narrow outlet and a large child. This is readily understood when it is considered that there might have been sufficient available room posteriorly toward the coccyx. This can be ascertained by measuring the anterior and posterior sagittals, as well as the antero-posterior diameter.

ESTIMATION OF DYSTOCIA.

Pelvic measurements alone offer no definite criteria by which the disproportion that may exist between the size of the child's head and the birth canal can be estimated, but the figures obtained forearms, as well as forewarns, one of probable trouble. It has been advocated that a fair estimate of the size of the fetus can be obtained by measuring the height of the fundus, according to Ahlfeld, but in my experience this has not added greatly to the estimation of disproportion between the size of the fetal head and the superior strait.

I have attempted to examine my patients one month before expected date of confinement to see if the presenting part has engaged in primipara every week thereafter until such has taken place. At the time of labor, especially in a primipara, I regard with suspicion any case where the head has not entered the superior strait. Further information is obtained by pushing the head downward to see if there is any overriding at the symphysis pubis. I consider this information exceedingly valuable, and the same procedure can be repeated with the hand in the vagina, at which time the diagonal conjugate should be remeasured. The determination of a disproportion in advance, should serve as the guide for the course of treatment to be pursued at the time of labor —whether operative procedures are necessary at an appointed time, or whether to allow a test of labor, with the expectation of interfering if no progress is made. Roentgenographic studies of the pelvis, while having their advocates, are apparently impractical, and can be employed only in exceptional cases.

SUMMARY.

1. Practical pelvimetry deals with the general consideration of a patient and not with a series of pelvic measurements.
2. External measurements offer only supplementary knowledge and give advanced information as to what one may anticipate.
3. Every obstetrician should adopt some definite classification of pelves, as a working basis.
4. The most important measurements named in order, are the diagonal conjugate and the transverse of the outlet.
5. The engagement of the presenting part offers valuable data in regard to a favorable prognosis.
6. When the fetal head overrides the symphysis pubis, disproportion is present.
7. Pelvimetry should be employed as a routine in every case.

ABSTRACT OF DISCUSSION.

Dr. H. Reid Robinson, Galveston: I believe that Dr. Johnson has omitted one important measurement that should be mentioned, and that is, Klien's Posterior Sagittal, which is of value in a funnel pelvis. In the majority of funnel pelves the shortening is limited to the transverse diameter of the outlet, and when this is 8 c.m. or less, we must regard it as a danger signal. Also, with this decrease in the transverse outlet is associated a narrowing of the pubic arch, so that a smaller segment of the foetal head can pass beneath it; so that the possibility of delivery will depend upon the actual length of the transverse of the outlet or upon the available space between the transverse diameter and the tip of the sacrum, (K. P. S.) If spontaneous

labor does not occur in primiparous women we should substitute pubiotomy for brutal attempts at forceps delivery. Three such cases have been successfully handled in this way in our service at the John Sealy Hospital during the past five years. The physicians who are ignoring pelvimetry, are not giving their obstetric patients a fair deal.

Dr. J. A. Wall, of San Antonio: Most of us know better, but still use our fingers for making obstetrical measurements, which is only a guess at the best. We should not be too hasty in applying too active measures in these abnormal pelves, for Nature will often help us a great deal. I once saw a very small girl who had been scared by all the old women because she was so small. But she was symmetrically small and she had a perfectly normal labor. The child was small in proportion to the size of the woman, and the labor was ended without even an excoriation of the vaginal mucous membrane.

THE PATHOLOGY AND SYMPTOMATOLOGY OF HODGKIN'S DISEASE, WITH REPORT OF TWO CASES.*

BY

H. C. HARTMAN, M. D.,
W. H. HILL, M. D.,
GALVESTON, TEXAS.

So much has been written concerning Hodgkin's disease since Sternberg, in 1899, established the fact that the condition is a histological entity, that most anything we can say on the subject must, to some extent, be a repetition of what has already been said by other writers. This paper is largely based on a study of a series of seven cases, two of which we consider quite unusual, both in their clinical manifestations and anatomical lesions.

PATHOLOGY.

From a pathological standpoint, Hodgkin's disease is usually thought of as a condition in which the characteristic histological changes are confined to the lymphatic system, mainly to the lymph-nodes proper and to the lymphoid follicles in the spleen, and an occasional case with nodules in the skin and liver showing the same microscopical picture. To such lesions are added the important changes from the normal brought about by the tumor-like masses of enlarged lymph-nodes in the thorax, abdomen and elsewhere.

We call attention to these familiar points in connection with the morbid anatomy of the condition, to emphasize the fact that except for alterations resulting from pressure, lesions in tissues other than those belonging to the hematopoietic system are only rarely associated with this disease. Our somewhat more recent experience in the postmortem room would indicate that metastatic foci of disease occur in the outlying organs and tissues in a larger percentage of the cases than published reports and the prevailing impression would lead one to suspect. This is important in that it takes away a striking resemblance, in at least one regard, to lymphosarcoma, with which condition it has so frequently been associated and probably will continue to be until a definite etiological factor is discovered, which will put an end to the controversy. We shall purposely avoid entering into a discussion of what has been referred to as the malignant stage of Hodgkin's disease. There can be no doubt that malignant transformations, sarcomatous and, perhaps more frequently, endotheliomatous in nature, may take place in the tissues of the Hodgkin's granuloma, but it would be no more proper to call this trans-

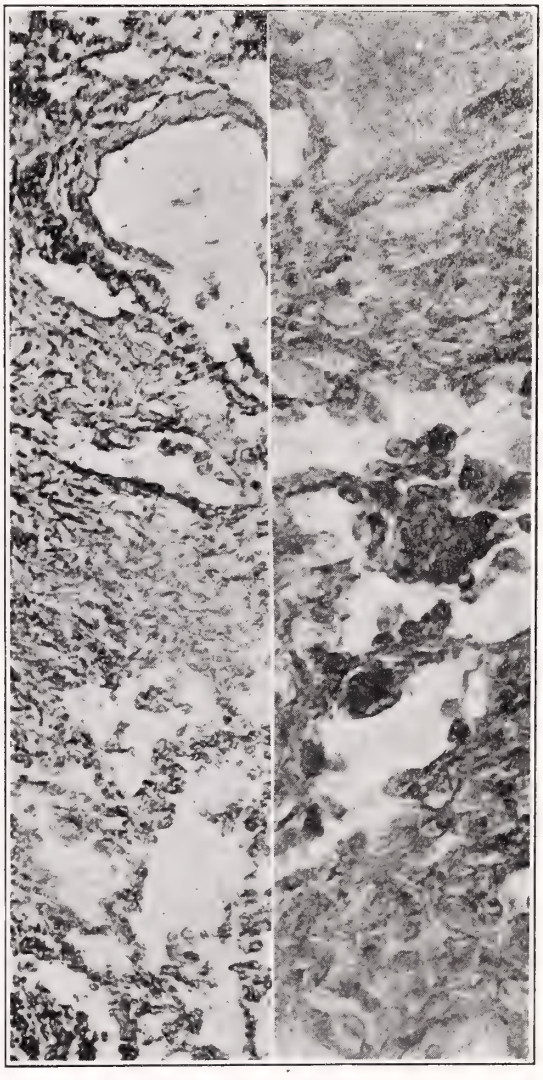

FIG. 1. Hodgkin's Disease of Lung. Case No. 2. (Low Power.)
FIG. 2. Same as Fig. 1. (High Power.) Showing dilated lymphatics, and large mononuclear and Dorothy Reed cells.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 1, 1924.

formation the malignant stage of this disease, than it would be to think of the development of a sarcoma from the connective tissue structures of a uterine fibroid (which occurs about once in every hundred cases) as a malignant stage of fibromyoma in that region.

The morbid anatomy of Hodgkin's disease must also take into consideration such

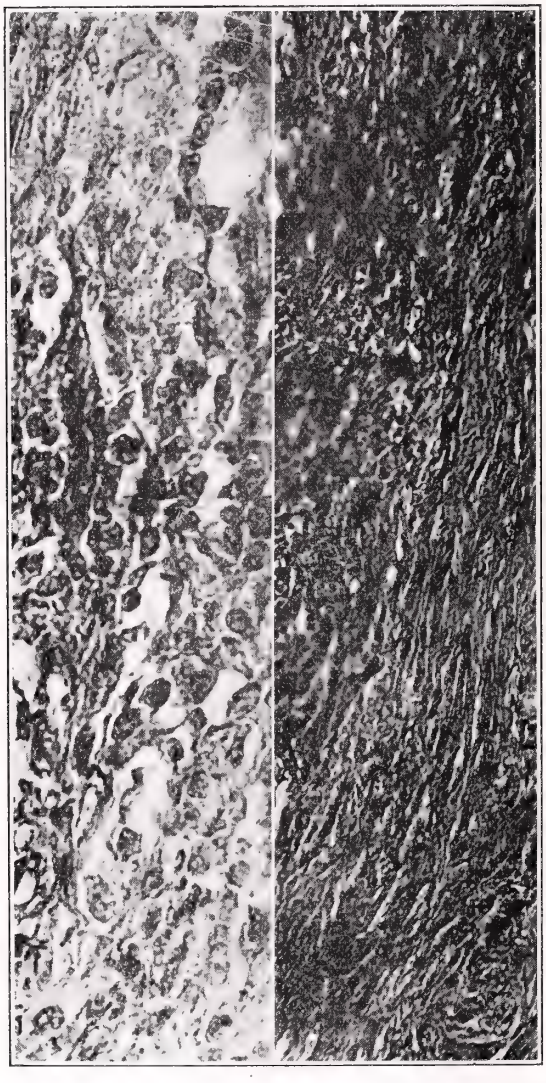

FIG. 3. Hodgkin's Disease of Lymph-node. (High Power.) Showing early third stage with proliferating fibrous tissue—granulomatous tissue.

FIG. 4. Hodgkin's Disease of Lymph-node. (Low Power.) Late third stage, with marked sclerosis and absence of granulomatous tissue.

unusual cases as those reported by Symmers, Wade, and Mellon, which indicate the probable existence of a variety of the disease in which the lymph follicles of the spleen are involved to such an extent as to bring about massive enlargement of the organ, while the lymph-node enlargements are relatively insignificant. There are also those interesting cases in which the most striking pathology is to be found in the pronounced overgrowth of connective tissue in the lymph-nodes and in the spleen. This is in the nature of a progressive scar formation throughout the node, converting it into a nearly solid fibrous mass, scattered through which are small collections of its characteristic cellular elements (See Fig. 3). In the neighborhood of such nodes, new clumps of lymphoid tissue are formed, which soon undergo the same changes. This would seem to explain the matting together of nodes of a group, as is so characteristically shown in one of our cases. (See Fig. 4).

The microscopic picture of the disease can be divided into three stages. First, there is a hyperplasia of the lymphoid tissue with the production of rather large mononuclear cells with faintly staining cell bodies which are supposed to originate from the germinal center of the nodes. The node at this time may give a picture similar to one undergoing chronic hyperplasia from irritation due to a neighboring malignant epithelial growth, or even due to a long continued chronic inflammation. At this stage, a definite diagnosis can hardly be made on the microscopic picture. In the second stage, there are present, besides the cells mentioned above, variable numbers of multinucleated cells which are supposed to arise from a proliferation of the endothelial reticulum! These are the Dorothy Reed cells and are considered diagnostic of Hodgkin's disease. Many of these cells are seen in the dilated lymph spaces, and areas of necrosis are frequent. In the third stage, a replacement fibrosis occurs, which is usually quite extensive. There is a marked decrease in the remaining lymphoid and granulomatous tissue, and a tendency to matting (See Fig. 4).

SYMPTOMATOLOGY.

The purpose of this general discussion of the symptoms of Hodgkin's disease is mainly to call attention to the variable clinical course of this important condition. In outlining the symptoms of the disease, the division suggested by Trousseau may well be followed as being both brief and simple, namely: that of the beginning or local enlargement of the lymph-nodes, spoken of as the latent period; and later, that of generalization with more or less involvement of the entire lymphatic system and the viscera. A majority of the cases, when first seen by the physician, present an enlargement of some of the nodes belonging to one of the groups of lymph-nodes, unaccompanied, in most cases, by pain, tenderness, or constitutional symptoms. A carefully developed history will reveal the

fact that at one or more times previous to the appearance of the swelling, the patient had been troubled with a pruritis which came without apparent cause and disappeared without treatment.

The primary manifestation of lymphatic involvement is usually seen in one of the superficial chains of nodes. Fifty-two of Gower's seventy-eight cases and seventy-one of Longscope's eighty-six cases, showed this selection, the cervical nodes being the group involved in the majority of the cases. In all of our cases, there was a primary involvement of the lymph-node and in six out of the seven cases, the early change was found in the cervical group. In those cases in which the deeper glands are the first to show the disease, it is usually the mediastinal and retroperitoneal nodes that are involved. This early stage may, at various times, be accompanied by constitutional symptoms. It is interesting to note that the duration of the so-called latent period is very variable, running from several weeks to ten or fifteen years.

In addition to the usual method of onset, there are: (1) those rare cases of the disease in which the late changes develop much more rapidly, instead of the condition passing through the latent period; (2) other cases in which there is a more or less simultaneous enlargement of all the nodes; (3) still other cases in which the superficial adenopathy begins late, following general symptoms of infection and toxemia; and (4) the group in which the early manifestations are pressure symptoms, such as dyspnoea, jaundice, sciatica, abdominal pain, etc., depending upon the initial involvement.

The second stage witnesses the generalization of the disease. At this time, renewed activity in the node or nodes primarily involved, is seen and extension of the process to adjacent nodes or groups of nodes, which may form large tumor masses. Evidence of metastatic foci of the disease in lymph-nodes in different parts of the body, is also seen at this time. There is no regular order in their spread from one group to another. The usual sequence in the frequent primary involvement of the cervical nodes is in the direction of the lymph current, but this is not constant. Retrograde infection has been observed, as for example, from the supraclavicular to the cervical nodes. The time element in the spread of the disease is very variable, and apparently depends to a great extent on the resistance of the patient. Soon after the onset of the second stage, the lymphatic structures in the liver and spleen become involved, with enlargement of these organs. Such involvement of the spleen is seen in about three-fourths of the cases.

Pressure, rather than interference with the organ by growth of the granulomatous tissue, is responsible in the majority of the cases for the pathological physiology of the disease. Transudation into any or all of

FIG. 5. Enlarged Mediastinal Glands in Hodgkin's Disease. Case No. 2.
FIG. 6. Nodules in Spleen in Hodgkin's Disease. Case No. 2.
FIG. 7. Late Third Stage of Hodgkin's Disease. Showing group of cervical nodes matted together and marked sclerosis.

the serous cavities, localized in an extremity or organ, or generalized, is a very common condition. Pressure on a venous channel or obstruction by granulomatous changes in the nodes is the usual explanation of this. In one of our cases, an edematous swelling of the loose tissues of the penis and scrotum was the first sign to call attention to a so-called latent lesion in neighboring lymph-nodes.

Among the most important symptoms of this stage is fever, which, while constant in occurrence, is very variable in type. According to Byfield, the temperature may be either (1) moderate, irregular and continous, (2) remitting, or (3) intermitting. Pel, and later Epstein, called attention to a very peculiar syndrome and gave it the name of relapsing pyrexia. A study of the temperature charts in our cases showed a very irregular, remitting type of temperature and with frequent intermissions. There was usually an afternoon elevation of the temperature, never excessively high, and it was often subnormal in the mornings. One of our cases displayed a temperature curve very much like that seen in typhoid fever. While the number of cases included in our study is too small to draw conclusions therefrom, our observations so far would lead us to subscribe to Byfield's classification of the temperature reaction in this disease.

The blood picture is that of a secondary anemia (the only constant change), that is, a decrease in the number of red cells with a proportionate decrease in the hemoglobin. It is interesting to note that Bunting, in reporting his observations in eleven cases, mentioned a variable white count, a normal percentage or a slight increase in lymphocytes during the early stages of the disease, with a marked decrease later, these cells being replaced by polynuclear leucocytes in the more active stages of the disease. He also found that, during the active stage, the eosinophilic count in the peripheral stream was low, while in the quiescent cases, there was an increase. This condition is explained by the probable chemotactic powers that destructive products in the lymph-nodes have for eosinophiles with a consequent drainage on the peripheral blood-stream. In our cases, a secondary anemia was recorded in every case, a leucopenia in three, a normal white count in two, and a mild leucocytosis in the remaining two cases. In the case whose temperature simulated that of typhoid fever, 16 per cent of the white cells were of the large mononuclear type. In another case with evidence of a very active pathological process, there was a rather marked polynucleosis.

Case No. 1.—The patient, a negro man, aged 18 years, presented himself in the Outclinic of John Sealy Hospital, on February 25, 1921, complaining of swelling of the scrotum and penis. The family history was of no importance, and his habits were those of the average of his class. His past history brought out the fact that, three years previously, he had noticed a swelling of the inguinal lymph nodes, which lasted about one week and disappeared without treatment.

His present illness dated back to about two months before the date of his admission to the hospital, when swelling of the penis and scrotum called attention to an enlargement of the femoral and inguinal nodes on both sides. These nodes increased in size and, a little later, a tumor mass appeared in the neck. The swellings were never painful.

On physical examination, he appeared to be fairly well nourished and mentally alert, but his face was somewhat pale and edematous. There were bilateral swellings involving the deep and superficial nodes of the neck, and the occipital nodes were slightly enlarged. There was marked edema of the loose tissues of the penis, and the scrotum was enlarged to the size of a quart measure. No matting together of the involved femoral or inquinal nodes was made out.

Examination of the gastro-intestinal tract, respiratory, cardio-vascular and nervous systems revealed no pathology. The spleen was not enlarged. The temperature was subnormal, respiration 22, and pulse 98. The blood pressure was 120:68. The Wassermann was negative. The blood count revealed 2,230,000 red cells, 46 per cent Hb., 5,800 white cells, and a normal differential count. A roentgenological examination showed "a thickening about the root of each lung and a shadow beneath the sternum, with the appearance of a mediastinal tumor or a dilated aorta." Sections of one of the cervical nodes removed on February 28, were diagnosed Hodgkin's disease. Following this, the patient was given *x*-ray therapy, and Fowler's solution, potassium iodide, and Blaud's pills were administered. Microscopic sections of a nodule from his skin, removed on April 29, showed the histological picture of Hodgkin's disease.

Between the time treatment was instituted and June 14, 1921, when the patient left the hospital of his own accord, there had been some diminution in the size of the nodes, but the edematous condition of the scrotum and penis was still present and he had grown more anemic and weaker. The temperature ranged between 96° and 104.6° F. during the first four weeks of his stay in the hospital, after which there was a gradual change until it rarely went above a hundred.

The patient was readmitted on June 29, 1921, with a subnormal temperature, a pulse rate of 108 and respiration of 28. He was greatly emaciated and dyspnoeic, and his body was covered with a scaly dermatitis. The cervical and inguinal nodes were greatly enlarged, with less enlargement of the axillary group. There was a generalized edema. Breathing was labored and was accompanied by a continuous respiratory grunt. In the upper halves of both lungs there were musical rales, while below that level moist rales and impaired resonance were found, with absence of breath sounds low down. A blood count revealed 3,280,000 red cells, 40 per cent Hb., 3,000 leucocytes, of which 85 per cent were polynuclears and 15 per cent lymphocytes. One thousand six hundred cc. of a yellowish, slightly turbid fluid was withdrawn from the left pleural cavity, and the following day 1,000 cc. of a similar fluid was withdrawn from the right chest. Examination of this fluid gave 500 cells per cc., of which

40 per cent were polynuclears and 60 per cent lymphos.

The patient died several days after his second admission. At autopsy, performed eight hours later, the following changes were found:

The body was that of a young, emaciated negro man. There was moderate enlargement of the cervical and inguinal lymph-nodes. The abdomen was distended and the lower extremities edematous.

The left lung was not visible on opening the thoracic cavity by removing the sternum. The left pleural cavity was found filled with a yellowish, slightly turbid fluid. The lung, about one-fourth the size of a normal organ, was in a state of pressure atelectasis. In the apex of the upper lobe, a firm whitish area measuring 2 cm. in diameter was seen, and clustered around it were a number of nodules similar in character but much smaller. The right pleural cavity contained a small amount of such fluid as was found in the opposite side. The lung presented nothing unusual.

Completely filling the available space in the mediastinum, there was found a mass of enlarged, discrete peribronchial and peritracheal lymph nodes, which were closely applied to the upper surface of the pericardium and the hila of both lungs, and which extended into the neck along the trachea and great vessels. On section, these presented a grayish-white, smooth surface.

The abdominal cavity contained a large amount of fluid similar to that found in the pleural cavities. The spleen showed a slight enlargement and, on section, small, firm, white areas were seen scattered throughout the organ. The liver also showed a slight increase in size, and a cut section revealed a few small whitish areas scattered throughout the organ. The peripancreatic lymph-nodes were enlarged and formed a mass the size of one's fist. The cut surface of the nodes was firm, smooth and grayish-white in color. A slight enlargement of the mesenteric nodes was noted. No changes were found in the lymph nodules in the intestines.

Anatomical Diagnosis: Hodgkin's disease, involving the cervical, inguinal, axillary, bronchial, peritracheal and peripancreatic lymph-nodes, and the left lung, spleen and liver; bilateral hydrothorax; hydroperitoneum, and compression atelectasis of left lung.

Case No. 2.—The patient, a Mexican man, 28 years of age, was a seaman by occupation. He was admitted to the wards of the John Sealy Hospital, September 22, 1923, complaining of fever and swelling of the ankles. His family history was negative for tuberculosis and other diseases with an important bearing on the case. Three years previously, in New Orleans, a tumor mass had been removed from the neck, which was diagnosed sarcoma. This mass had been present three months before it was removed, and another swelling appeared in that region about a year later. The complaint that brought the patient to the hospital was of about four weeks' duration. The early symptoms were loss of appetite, fever and weakness, followed by loss of weight. Swelling of the ankles was first noticed several days before coming to the hospital.

At the time of admission, the temperature was 103° F. and the pulse rate 110. Physical examination showed a somewhat emaciated and anemic Mexican man with an operative scar on the left side of the neck, but no glandular enlargement or swelling of any kind in this region. The abdomen appeared distended and was tympanitic. The liver was enlarged to two fingers breadth below the costal margin. The inguinal nodes were slightly enlarged and tender to pressure. There was a systolic murmur, soft and blowing in character, with its point of maximum intensity over the aortic area. The ankles were swollen, somewhat more so on the right side.

At the time of admission, a blood count showed 3,000,000 red cells, 50 per cent Hb., 5,200 white cells, of which 60 per cent were polynuclear, 18 per cent small mononuclears, 16 per cent large mononuclears, and 1 per cent transitionals. Smears were negative for malaria. Three days later, there was a positive Widal in a 1:160 dilution. The urine showed a trace of albumin and an occasional hyaline and finely granular cast. The temperature varied from 102° to 104° F., with intermissions in the early stage of the illness, but none later. The pulse was dicrotic in character and ranged between 96 and 104. There was dullness over the apices of both lungs, but no rales. No enlargement of the spleen was made out. Tenderness was noted over the gallbladder. Blood culture for typhoid bacilli was negative, and the sputum did not show tubercle bacilli. The patient died, October 16, 1923, and the body was autopsied on October 18. The following findings were recorded:

The body was that of an emaciated male Mexican. Rigor mortis was present. There was a scar on the left side of the neck about 8 cm. in length. The cervical lymph nodes of both the anterior and posterior groups on left side, showed moderate enlargement. The abdomen was distended and tympanitic.

The left pleural cavity contained between 200 and 300 cc. of straw-colored fluid. The left lung was slightly larger than the normal organ. Scattered throughout the organ, but more numerous in the lower lobe, there were seen rather firm grayish-white areas irregular in outline and size, the larger ones measuring two centimeters across. Clustered around the larger areas were many small, slightly elevated grayish nodules with the appearance of miliary tubercles. Similar small whitish areas were seen in the primary bronchi. No direct connection could be traced between the lesions involving the pulmonary parenchyma and the changes in the enlarged bronchial nodes. The right pleural cavity and lung presented changes such as seen on the opposite side, but with larger and more numerous areas of consolidation in the lower lobe of the lung.

There was marked enlargement of the peribronchial and peritracheal lymph nodes, the largest measuring 8 by 3.5 cm. (See Fig. 5.) The cut surface was smooth, rather firm, and whitish in appearance. The pericardial cavity contained a slight excess of clear fluid. Nothing unusual was found in the heart. Several hundred cubic centimeters of clear fluid was found in the peritoneal cavity. The spleen was increased in size, measuring 15 by 12 by 5 cm. Through the capsule and on the cut surface, numerous whitish areas, rarely more than a centimeter across, were seen throughout the organ. The liver was definitely increased in size, and a few widely-scattered whitish areas were seen in it, on section. Other organs and tissues did not show important changes from the normal.

Anatomical Diagnosis: Hodgkin's disease of the cervical, peritracheal, peribronchial and inguinal lymph-nodes, and of the lungs, liver and spleen.

SUMMARY.

1. There are two clinical and three pathological stages in the disease.
2. The symptoms of the disease are usually due to pressure rather than to interference with function by the granulomatous tissue.

3. Matting of the nodes is rarely seen, except in the very late stage.

4. The nodes do not tend to break down and suppurate.

5. There are no characteristic blood findings, as in leukemias.

6. There is a more general distribution of the granulomatous tissue in the viscera than is usually suspected.

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ABSTRACT OF DISCUSSION.

Dr. C. T. Stone, Galveston: As my own interest in and experience with Hodgkin's Disease is largely clinical, what I shall have to say will deal especially with that phase of the subject. Fortunately, as the authors have pointed out, in a large majority of instances the disease begins in the cervical glands where the patient's attention will be quickly attracted to the lesion. Fortunately also, an accurate diagnosis is an easy matter from the classical pathological picture of sections of a gland removed for biopsy. The very earliest pathological change, a lymphoid hyperplasia resembling that seen in simple inflammatory change in the glands, is certainly of very short duration, and in most instances, by the time the individual consults the physician, the characteristic alterations have already taken place.

Most pathologists regard these changes as inflammatory, but a minority consider that they are due to neoplastic involvement. Just what causes the disease is not definitely known. Frankel, Much, Rosenow, Bunting and Yates, and others, have frequently demonstrated a dipththeroid organism in smears and cultures, made from the glands. However, considerable skepticism exists as to the exact etiologic relationship of these diphtheroid organisms to Hodgkin's Disease. Bunting and Yates consider that in the diagnosis a blood count showing a secondary anemia, an absolute lymphopenia, and an increase in the large mononuclear and transitional elements, with a great increase in the number and size of the platelets is quite helpful. The lymphopenia is certainly helpful in differentiating Hodgkin's from the adenopathy of syphilis and tuberculosis, where the lymphocytes are increased. Clinically, Hodgkin's can usually be distinguished from lymphosarcoma by the fact that, in the latter, the glands are more apt to be densely matted together and adherent to and infiltrating the skin and surrounding tissues, and also by the more generalized glandular involvement in Hodgkin's disease. The fever, often of the Pel-Ebstein type and, at times, of the septic type, gives the disease the appearance of an infection, but in the latter, the deeper glands are the first to be involved. The disease may often resemble endocarditis lenta for a considerable time. Here the blood picture may assist the clinician in differentiating the two conditions, unless the case happens to be a Hodgkin's with leucocytosis. Sooner or later, however, the superficial glands enlarge, and then the final and crucial test in the differential diagnosis, the histological examination of an excised gland, can be made.

Dr. Hill (closing): Although the etiology of this disease is unknown, we are of the opinion that Hodgkin's Disease is an infectious granuloma, because of its clinical course, simulating an infection or toxemia, and the fact that the tissues involved seem to show more evidence of an inflammatory hyperplasia than of a new growth.

PRELIMINARY REPORT OF THE WORK AT HELLA TEMPLE CHILDREN'S HOSPITAL.*

BY

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I wish to make a preliminary report of the work done at the Shriner's Hospital in Dallas during the last four months, for the purpose of acquainting you with the character of cases suitable for admission to this institution. I also wish to convey some information relative to the manner in which the children are gotten into the hospital.

In the organization of a working plan, the hospital authorities have counted on the active co-operation of the regular medical profession. A part of the admission requirement is the physical examination and recommendations by the family physician. Less than fifteen per cent of our patients are from the city of Dallas, and it is impracticable to have children come three or four hundred miles only to find that we can not offer them any prospect for improvement. If the hospital is to operate smoothly and efficiently, it is absolutely essential that the doctors over the state help us to select those who can be benefitted, and to discourage those who are financially able to pay for medical service. It will be your privilege, therefore, to learn in this sort of official way, just what we propose to do for these children and how you can render assistance.

It may be interesting to contemplate for a moment the very extraordinary impulse to do a big charity work which gave life to the Crippled Children Movement. Whenever an enterprise has for its object the improvement of the health of a community, our profession should be the first to make proper acknowledgment. We should express appreciation for the splendid work the Shriners of Texas are doing for the poor children in our midst. Never before has any organization attempted to provide medical service for so large a class of people, without cost to the patient, as has been done by the Shriners of North America. The work in Texas comprises a part of this service, but in ad-

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

dition will independently provide for the children of our own territory.

The Shriners did not select this field of activity by accident. They deliberated on the matter for a long time and, I am pleased to believe, chose wisely. The time has passed when any social order can survive without doing something worth while. For years the Shrine had been the playground of Masonry, but, with the changing tide of world sentiment, the membership of this great order felt spontaneously the obligation to perform a real humanitarian service. The nation, at this time, was interested in restoring crippled men; what was more natural than the thought of curing deformities in children? That the plan was feasible had been demonstrated to the Scottish Rite Masons by Dr. Michael Hoke and Mr. Forrest Adair of Atlanta, Georgia. The excellent work done there attracted so much attention that Mr. Adair presented it to his co-workers in the Imperial Shrine Council. The enthusiasm of Mr. Freeland Kendrick, now mayor of Philadelphia; Mr. Sam P. Cochran of Dallas, and others, aided greatly in the favorable consideration given by the Shrine bodies. Their response was to build, equip and maintain enough hospitals in North America to give every poor crippled child an opportunity for reconstruction. The rapid development of this work is generally known.

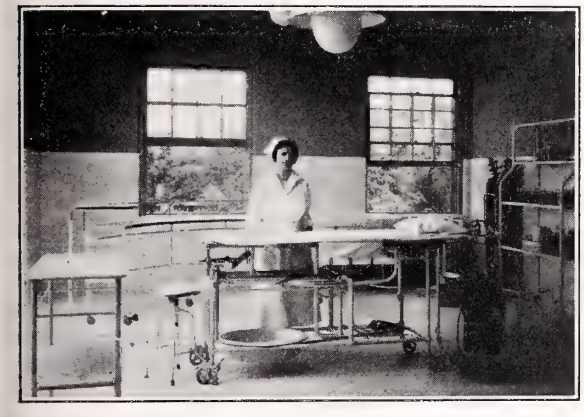

Fig. 1. Operating Room, Hella Temple Children's Hospital.

I wish to digress slightly to make this observation: While the crippled children are well provided for and while the Shriners have taken on a big job; there are many other classes of patients, both children and adults, who need this "big brother" attention, and there are many other large organizations looking for something to do. Now is the opportune time for constructive work in organizing charity service.

The Dallas institution, fostered by the Hella Temple, has been in operation for four months. Its capacity is fifty beds, with an administrative building, operation suite, brace shop, physiotherapy clinic and x-ray department, sufficient to care for as many more. The building is well planned, the wards are roomy with plenty of sunshine and modern equipment designed for crippled children. The most dominant impression one gets on visiting the hospital, is the cheerful and contented appearance of the children's ward. This can be attributed to two things —first, the parents visit only twice a week; and second, the grouping of a large number of children with similar illnesses. They are anxious to get well quickly and do not wish to be outdone by others whom they think have had the same operation. At first, we had some difficulty in convincing parents that their children would stay away from home. Now we have only to show them a ward and there is no further trouble. It is necessary to make an application for admission, which includes a medical report from the family physician and a statement by two responsible citizens that the parents are financially unable to have the work done at a private sanitarium. The age limit is fourteen years. The policy of the governing board is very liberal, because a man may be able to pay for a short period of hospital treatment, yet not be able to meet the expense of two or three months' hospitalization with a doctor's bill added.

Fig. 2. A Happy Ward in Hella Temple Children's Hospital.

One hundred and seventeen patients have been treated at the hospital during the four months, including the fifty now in the hospital. The waiting list is from sixty to seventy-five. Of the 117 children, 48 had deformities following poliomyelitis; 19 congenital club feet; 15 cerebral plegias; 12 tuberculosis (4 of the knee, 6 of the hip, and 2 of the spine); 4 old fractures; 4 osteomyelitis; 3 congenital hips; 3 bow legs; 2 knock-knees; 3 scoliosis; 1 primary muscle atrophy;

1 hemangioma; 1 dyschondroplasia; 1 achondroplasia, and 1 chorea.

The poliomyelitis cases represent the usual variety of deformities. Well-directed physiotherapy, combined with some reconstruction measures, offers improvement to nearly all of them. Those cases of spinal muscular weakness with curvature, are treated in a manner designed to give a straighter and more stable back. When all the correction possible has been obtained, fusion will be done to prevent recurrence. We do a relatively small number of tendon transplantations in the legs, because in all the clinics the results have been disappointing. When the ankle becomes unstable to any marked extent, a plastic bone operation becomes necessary. There are several operations suitable for the different positions of deformity, and each has its particular indication. Above the knee and in the arms, tendon operations are more valuable. It is unfortunate that so many children do not have the opportunity for treatment soon after the acute attack, because the most spectacular results come from proper muscle training.

Tuberculous joint cases are quite numerous, although we have admitted only ten cases. Most of them are treated in the outpatient department. Movable joints in which there is active disease and deformity present, are usually straightened. Stiff joints with active disease are not disturbed and the deformity is corrected, at the proper time, in healthy bone adjacent to the joint. Fixation over a long period of time, with the joint in good position, is sound treatment for any case. Heliotherapy and ultra-violet radiation helps the local and general condition. To be of value, sun treatment must be given accurately.

Congenital club feet are quite easy to correct in infancy. The proper time to start treatment is at the age of two weeks. We rarely do any open procedure on a child under four years of age. The more rigid feet will yield to manipulation if two or three light anesthetics are given, and when corrected in this manner are more supple and in every way better feet. The Achilles tenotomy, quite frequently done before the other elements of deformity are corrected, is especially to be condemned. We have had three children with ununited fractures of the tibia, one occurring at delivery and two in early infancy. Bone-graft operations in children heal more rapidly than in adults.

Our spastic paralysis cases form the second largest group applying for treatment. Most of them are treated in the physiotherapy department as out-patients, and are not admitted to the wards. It is difficult to make a proper classification of children suitable for hospitalization, but it is certain that we cannot benefit those whose mental development is inadequate to coöperate in treatment. The average parent will tell you that their child is bright, when, perhaps, it really has a rating of 20 per cent mentality. The baby two or three years old, who is just learning to stand with support and can talk in sentences of a half dozen words, will improve with exercises and training. Older children who have developed fixed contractures and with a fair mentality, can be helped a great deal, either by a nerve operation or some stabilizing procedure.

The unusual cases cannot be discussed in a paper of this character. We are compiling some interesting data, which I trust will, at a future time, be a contribution to reconstruction surgery in children.

CEREBRAL ARTERIOSCLEROSIS.*

BY

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In the field of preventive medicine great strides have been made in the prevention of communicable diseases; but, unfortunately, there is a corresponding increase in the incidence of the so-called degenerative diseases which attack the individual in the latter decades of life. In the last figures provided by the Bureau of the Census, in 1923, it is shown that diseases of the heart, kidneys and blood vessels, which in their terminal pathology are almost invariably connected in one way or another, are responsible for more deaths than pneumonia and tuberculosis combined. One person in every five in the registration area of the United States, succumbs to diseases of the heart or nephritis. Civilization of today, with all its complexities and refinements, has thrown many means of protection about us from contagious and infectious diseases; but the same civilization has undoubtedly made for an increase in cardio-vascular-renal diseases.

Of these degenerative diseases, arteriosclerosis is one of the important conditions that clinicians are called upon to combat. The literature on the subject is overwhelming in its volume; but so authoritative a pathologist as MacCallum[1] feels that most of what has been written about it has only the value of opinion, and that we are extraordinarily ignorant with respect to this very common affection. When one consults the literature

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 29, 1924.

1. MacCallum, W. G.: "Arteriosclerosis," Physiological Review, Vol. ii, p. 70, January, 1922.

on this subject he is impressed by the large number of etiological factors which are given as the starting point of this condition. Thus, we find that age, sex, heredity, arterial hypertension, infections and toxic processes, overeating, obesity, hard manual labor, lack of exercise associated with sedentary life and nervous worry, and glandular dyscrasia—all command distinct consideration. Only the classical type of arteriosclerosis is considered in this paper, as other varieties of arterial degeneration such as the syphilitic, thromboangiitis obliterans and periarteritis nodosa, are distinctly inflammatory, while the former is purely a degenerative process.

Adami and McCrae[2] state that arteriosclerosis "is the most common cause of death, direct or indirect, in those who attain to middle life, or we may say, after thirty years of age. It is incapacity on the part of the diseased arteries to respond to the needs of one or another organ that leads to malnutrition and atrophy of those organs, even where graver and more immediate disturbances are not produced by distension of the diseased artery (aneurism) or by rupture of the same (hemorrhage and apoplexy.)" From this statement it is apparent that the older a person is, the greater his chances are for arteriosclerotic changes. In a fairly large series of cases studied by Price[3], the average age at which symptoms were first noticed was 60.9 years. It is rather uncommon for arteriosclerosis to produce symptoms in those under 50 years of age—although the pathological process causing its inception may have begun years before—and it is increasingly common with advancing years.

Males are affected twice as often as females; and in some statistical studies, even in a larger ratio than two to one. Most clinicians are of the opinion that both aortic aneurism and extreme degrees of arteriosclerosis are far less frequent in women than in men.

Heredity undoubtedly plays some part in the etiology of this condition. Osler stated that some individuals seem to inherit defective elasticity in their vital rubber; and it is a common clinical experience that many members of a family past middle life succumb to some complication of arteriosclerotic changes.

It is usually considered that if hypertension is prolonged sufficiently, arteriosclerosis will sooner or later develop, and that this is the direct result of the elevation in blood-pressure. However, not all people with hypertension have arteriosclerosis, and conversely, not all people who have arteriosclerosis have hypertension. Most of the patients presenting arteriosclerotic changes show distinct blood-pressure elevation, but now and again one comes across cases with marked vascular thickening and a normal blood-pressure.

Just what relation infections bear to chronic arterial disease is not altogether clear, but apparently they do have some causal relationship. A recent article by Ophüls[4] dealt with this subject in an interesting manner. He studied the records of five hundred consecutive autopsies with reference to preceding infections as given by the clinical histories and careful anatomical study. He divided the cases into two groups: (1) those in which all histories or signs of previous infection were absent, and (2) those in which such were detected. In the first group chronic arterial disease was almost entirely absent, while in the latter it was frequently encountered. Rheumatic infection appeared to be a very powerful provocative agent in this condition. If this work is corroborated by subsequent investigations, it will form an important contribution to the etiology of arteriosclerosis.

Intoxications and toxic states are generally thought to have some bearing upon the development of arterial disease. These toxins might well be divided into "endogenous" and "exogenous" toxic bodies. Of the endogenous toxins, those of gout, diabetes, chronic intestinal stasis and chronic nephritis stand out prominently. Among the exogenous toxins, should be mentioned lead and arsenic as having been fairly conclusively proven. Much speculation has been indulged in regarding the toxic effect in this disease of coffee, tea, alcohol and tobacco, but their bearing so far is purely hypothetical.

There is considerable difference of opinion regarding diet as a cause of arteriosclerosis. Newburgh and Squier[5], and later, Newburgh and Clarkson[6] have produced experimental arteriosclerosis in rabbits by feeding a diet high in animal protein. However, they do not conclude that the human type of the disease is necessarily brought about in this way, and reliable clinicians and students of metabolism, notably Mosenthal, are of the opinion that such experiments cannot be proven to apply to the human species. What

2. Adami and McCrae: Text-book of Pathology, Lea & Febiger, 1912.

3. Price, Geo. E.: "Arteriosclerosis of the Nervous System: Remarks on Etiology and Symptomatology," N. Y. Med. Jour. and Med. Rec., Vol. cxviii, p. 425, October, 1923.

4. Ophüls, Wm.: "Arteriosclerosis and Cardiovascular Disease: Their Relation to Infectious Diseases," Jour. A. M. A., Vol. lxxvi, p. 700, March, 1921.

5. Newburgh, L. H., and Squier, T. L.: "High Protein Diets and Arteriosclerosis in Rabbits—A Preliminary Report," Arch. Int. Med., Vol. xxvi, p. 38, July, 1920.

6. Newburgh, L. H., and Clarkson, Sarah: "Production of Arteriosclerosis in Rabbits by Diets Rich in Animal Proteins," Jour. A. M. A., Vol. lxxix, p. 1106, September, 1922.

seems to be a more important cause of this disease is overeating, with consequent obesity, particularly in those individuals who lead sedentary lives and whose business is associated with considerable nervous strain and worry.

It is generally admitted that hard manual labor predisposes to chronic arterial disease. It is found far more frequently in the male wards of the hospital than in the female, and presumably for this reason.

Among glandular dysfunctions associated with arterial changes, diseases of the thyroid, pituitary and adrenals have been extensively studied, but as yet this field is still highly speculative.

Therefore, in summing up the etiology of arterial disease, the condition is really the result of the wear and tear of life, both physical and mental. Infections, toxemias, occupational conditions and social environment, all enter into the complex picture.

In this paper it is desired to bring out especially some features of arteriosclerosis as it affects the cerebrum. It is a well known clinical fact, as pointed out by Stengel[7], and others, that patients may show considerable sclerosis of various individual organs or tissues, without manifestating an advanced generalized arteriosclerosis. For example, patients with angina pectoris associated with extensive degeneration in the coronary vessels, may have only slight changes in the remainder of the arteries. Likewise, patients with renal arterial changes may, at least for a time, show very little pathology in the peripheral vessels. So also, patients with extensive cerebral arteriosclerosis may have the disease limited almost entirely, to the arteries of the brain. According to Church[8], the symptoms of cerebral arteriosclerosis are those which result from the starvation of essential brain cells as the consequence of narrowed vascular channels.

As cerebral hemorrhage, thrombosis and embolism are the most serious complications of diseases of the cerebral vessels, it is important to recognize lesions of these vessels before such complications ensue, and institute treatment which will have a tendency to minimize the number of these disastrous sequelae. The cerebral symptoms resulting are frequently first noticed in the ear or as an affection of the labyrinthine portion of the eighth pair of nerves in the form of vertigo. It is a most distressing symptom, and was found, by Stein[9], to be present in 46 per cent of a series of over 1,000 patients. Tinnitus is less usual, and some impairment of the hearing may result.

One of the most clear-cut groups of symptoms of cerebral arterial disease occurs in those patients who present loss of memory for recent events, associated with gradual impairment of attention and faulty association of ideas. Lability of the emotions is seen in a considerable number of these patients. Headache in some form is common, and is often of the nuchal variety; or, as the patients often describe it, the pain is at the base of the skull or at the base of the brain. It is very intractable, worse in the morning, and often very depressing to the patient. Paresthesias, numbness and tingling, are common symptoms usually present in the extremities. In the eye, in many cases, a definite arcus senilis is found, though not universally. Price[3], in a recent article, states that when retinal arteriosclerosis is found there is always cerebral arteriosclerosis, but that extensive changes in the cerebral arteries may be present without demonstrable changes in the retinal vessels. In a still more recent article, O'Hare and Walker[10] have made the interesting discovery that patients with extensive general arteriosclerosis may not show any retinal changes, and that when such is observed, it is usually in patients without vascular hypertension. They believe that a definite relationship exists between "small vessel sclerosis," as indicated by the retinal arteries and the systemic arteriolar-capillary field and hypertension; and they suggest that demonstrable sclerotic changes in the retinal vessels may be taken as indices of small vessel sclerosis throughout the body.

Apoplexy, as the result of hemorrhage, thrombosis, or embolism, occurs in a considerable number of these cases; in over 25 per cent of one hundred cases reported by Price[3]. This seems to be rather a high percentage; perhaps 10 or 15 per cent would be more nearly accurate. Convulsions resulting from cortical embolism, or minute hemorrhages from the miliary aneurisms may occur; and if the lesion is one-sided, as was recently observed in the wards of the Sealy Hospital, typical Jacksonian seizures may result.

Patients with arteriosclerosis of the cerebral vessels usually show some hypertrophy or dilation of the heart, with or without murmurs resulting from valvular sclerosis or relative insufficiency. Albumen and tube casts are commonly found in the urine of

7. Stengel, A.: "Nervous Manifestations of Arteriosclerosis," Amer. Jour. Md. Sc., Vol. clxxxix, p. 189, 1908.
8. Church and Peterson: Nervous and Mental Diseases, W. B. Saunders Co., 1911.
9. Stein, C.: "Early Diagnosis of Cerebral Arteriosclerosis," Abst. Jour. A. M. A., Vol. lxxvi, p. 830, March, 1921.
10. O'Hare, J. P., and Walker, W. G.: "Arteriosclerosis and Hypertension," Arch. Int. Med., Vol. xxxiii, p. 343, March, 1924.
3. Price, Geo. E.: "Arteriosclerosis of the Nervous System: Remarks on Etiology and Symptomatology," N. Y. Med. Jour. and Med. Rec., Vol cxviii, p. 425, October, 1923.

these cases, although such are frequently absent.

The mental symptoms, in addition to those already mentioned, consist of a gradual, progressive dementia, inability to perform usual tasks, impairment of judgment, inaccuracy, emotionalism, and irritability—the patient finally sinking into the deepest dementia, at times, with persecutory delusions and hallucinations. These symptoms are described in various text-books under the designation of senile dementia or arteriosclerotic insanity.

The history, physical examination and autopsy record of the following case is reported because of its unusual findings, the age of the patient, and the lack of a definite etiological factor:

CASE REPORT.

Mrs. E. D., aged 47, a housewife, was admitted to the John Sealy Hospital, October 16, 1923. She was English by birth, but had lived in this country for some years. Her chief complaint was severe headache and numbness of the left side of the body.

HISTORY.

Her family history was unimportant except that one brother had died of tuberculosis. She had been married for sixteen years but her husband had died from angina pectoris, two months previously, at the age of 50, although he had suffered from tuberculosis of the hip-joint. She had never been pregnant.

She had had the usual diseases of childhood, influenza five years previously, gallstones four years before but was not operated, and she had suffered from some form of anemia fifteen years previously. Eighteen years before her present illness she had been thrown from a buggy and had sustained a compound fracture of the left forearm and a scalp wound, with minor wounds about the face.

She formerly drank from three to four glasses of beer, and two cups of coffee and two cups of tea, daily. She stated that she never over-ate.

Two weeks before admission to the hospital, while lying in bed, she suddenly felt numb over the left side of her body. She got up and walked about, and the numbness disappeared. Two days later, the same thing occurred while she was sitting in a moving picture show. Four days prior to her admission, she developed a severe temporal headache. The pain was sharp and shooting in character, and hurt her so badly that she could not see. She had always obtained relief from headaches from aspirin, but even in large doses, it failed to relieve this pain.

At the time of her admission to the hospital, the headache was continuous and severe with intermittent numbness of the left side of the body. She felt dizzy whenever she stooped over or looked up, and could not grasp things well in her left hand. At times there were tingling sensations in the left hand and arm. Her bowels were regular and there was no polyuria. She was troubled with slight shortness of breath on exertion, and palpitation of the heart. Her maximum weight was 150 pounds, but for the past few months it had been around 140. She stated that she had been troubled a great deal recently with insomnia and dreams.

PHYSICAL EXAMINATION.

Examination revealed a white woman, rather overweight, about 47 years of age. Her height was 62½ inches and her weight about 140 pounds. There was a constant winking movement of her eyelids due, she said, to the light hurting them.

Examination of the head and neck showed coarse, thin hair and evidence of an old injury of the left temporal region. Her nasal septum was deviated to the right. There were no glandular enlargements. Her tongue was clean but her teeth were in poor condition on account of caries and pyorrhoea. A number of her teeth were missing. The tonsils and pharynx were negative, and also the abdomen. The respiratory system was negative.

The heart was normal in size and position. The valve sounds were clear and no murmurs were heard. The heart rate was 90 and the blood-pressure 156/76. The radial, bronchial and temporal arteries were not sclerotic on palpation.

Her left pupil was larger than the right, which was contracted and irregular. Both pupils reacted to light and accommodation. The patellar tendon reflexes were lively. The Babinsky, Gordon and Oppenheim and Chaddock tests were all negative. Her gait, sensation, mentality and speech were normal.

Her blood Wasserman was negative. The blood count was as follows: 4,756,000 red cells; hemoglobin 100 per cent; white cells 8,400; polynuclears 65 per cent; lymphocytes 33 per cent; large monos 3 per cent; eosinophile 1 per cent, and basophiles 1 per cent. The spinal fluid was normal in all respects.

During the first nine days that the patient remained in the hospital her headache disappeared and the numbness of the left side of the body made considerable improvement. She was expecting to be discharged from the hospital on the twenty-sixth, but about midnight of October 25th she was seized with some sort of convulsion and fell out of bed. When the nurse came to her assistance, it was found that she was paralyzed upon the left side of the body.

Examination of the patient on the following morning, showed a complete paralysis involving the entire left side, and the patient was unconscious. By the end of the third day, the patient had partially recovered consciousness, but was very sluggish mentally and could not describe her feelings very well. It was therefore impossible to determine whether or not sensory disturbances were present upon the left side, although she did complain of pain in the affected extremities. She made no further improvement; in fact, she lost ground steadily, finally developing a slight pulmonary edema with passive congestion of both lungs, and dying November 29, 1923.

At autopy, the following diagnoses were made: Cerebral arterio-sclerosis; thrombosis middle cerebral artery on the right side; cerebromalacia, right side; pulmonary edema; hypostatic congestion, bases both lungs; early cirrhosis of the liver; chronic cholecystitis with stones; early chronic nephritis; chronic salpingitis; fibro-myoma of the uterus; chronic myocarditis; coronary sclerosis; chronic neuritis, and non-specific aortitis.

The remarkable features about this case are the predominant arterial changes in the brain, coronary arteries and kidneys, with only slight demonstrable changes in any of the peripheral vessels, and with a nearly normal blood-pressure. The disease of the cerebral vessels was so advanced that a complete thrombosis of the middle cerebral artery resulted. This, occurring in a woman forty-seven years of age, with a negative luetic history and with neither serological nor anatomical evidence of syphilitic infection, makes an unusual picture.

Cases like that just described emphasize the great need of careful study of such patients before serious complications have taken place, if possible, in order to make a diagnosis of the underlying etiological factors as a basis for rational therapy.

The actual treatment of cerebral arteriosclerosis is identical with that of generalized arterial degeneration. Usually these patients come under observation with far advanced lesions, and consequently the results of therapy are often disappointing and unsatisfactory. Foci of infection should be removed; coexisting diseases, such as nephritis, diabetes, gout, and intestinal stasis, should receive appropriate treatment, and the patient should be taught how to live so that he may avoid much of the stress and strain incident to a life of high mental and physical tension. Overeating and obesity should, if possible, be corrected. Violent physical exertion is considered harmful, but milder exercise in the open air is thought to be beneficial. Worry, mental excitement, and nervous irritability all seem to favor the progression of the disease, and should be guarded against. All forms of toxemia arising either within or without the body, require suitable measures for their elimination. If a well balanced regime of work, rest, and recreation (with the idea of moderation in all things) can be instituted, along with the fundamental points in treatment above outlined, we will have accomplished the most possible. Drugs play no large part in the management of such cases. Iodides given in small doses over prolonged periods may be helpful. Bromides and the milder somnifacient drugs may be indicated for restlessness and insomnia. The various cathartics and purgatives are useful to some degree in most instances. Where there is pronounced vascular hypertension, strict hygienic and dietetic measures are required. In excessive hypertension, the patient may do best if confined to bed for a time, on a milk diet, with free purgation, and, perhaps, venesection. Nitroglycerin and other powerful vasodilators should be reserved for emergencies such as great dypsnea or anginal attacks.

These palliative procedures are necessarily limited in their universal applicability and efficiency, but if they are conscientiously and painstakingly made a part of the daily life and practice of these patients, some of them, at least, may be spared the graver complications of far advanced arteriosclerosis of the brain.

ABSTRACT OF DISCUSSION.

Dr. M. D. Levy, Houston: Dr. Stone has covered this subject in a complete manner and there is apparently very little to add in the discussion. The general etiology, pathology and symptomatology have been discussed. However, certain toxins and foci of infection might be mentioned. Rosenow calls our attention to the selective activity of certain bacteria and this can certainly be applied as a causative factor in the etiology of cerebral arteriosclerosis. We had a man, aged 20, come into John Sealy Hospital who was dead when admitted. Autopsy showed a marked hemorrhage at the base of the brain and coming from the circle of Willis. Examination of these vessels showed an arteriosclerosis, while other vessels of the body did not show the sclerosis. A plausible explanation for this is the selective activity of certain bacteria and toxins. Another condition where we see localized sclerosis is at the menopause in women. Of course, they may have a general arteriosclerosis at this period.

Dr. Wilmer L. Allison, Fort Worth: Some years ago, Cushing showed that the blood-pressure could be raised or lowered at will by raising or lowering the intracranial pressure. Spinal fluid drainage might therefore be of some benefit to these cases. A robust patient came to me with a blood-pressure of 200 mm. Hg. The first spinal puncture showed blood in the spinal-fluid. After three punctures this patient's blood-pressure dropped to 150 systolic. Another help for these patients is rest and proper diet. A patient 53 years of age, who weighed 200 pounds and with a blood-pressure of 200 mm. Hg. came to me complaining of dizzy spells. He was sent home and put to bed on a milk diet. In two months his blood-pressure was down to 140. Blood-pressure, then, can be lowered by spinal puncture, by the use of magnesium sulphate, and by proper rest and diet.

Dr. C. M. Grigsby, Dallas: I am very much interested in cerebral arteriosclerosis, especially the convulsions. I have seen several cases lately with the diagnosis of cerebral endarteritis, and most all of these cases occurred after middle life. Some of these patients had epileptiform convulsions, but since these had had no convulsions before fifty years of age, I do not think the seizures were true idiopathic epilepsy. These cases came from all walks of life—preachers, cowmen, and one woman. I also treated a doctor who was beyond middle life, who had high blood-pressure and epileptiform convulsions. I gave him iodides; but I relied on luminal to stop the convulsions with great satisfaction. Bromides might be helpful in these cases, but luminal does not depress the patient as the bromides do. If the bromides had been in use at the time of Cæsar and Napoleon, there would not have been ten pages written about either of them.

Antisyphilitic treatment should be given in suitable cases. I was impressed by one case that gave a history of a stroke of apoplexy 30 years previously. He was a brilliant Mason who had very suddenly lost his memory. I made up my mind that no one could live that long following a stroke of apoplexy, unless it had been caused by one disease—syphilis. We are now treating this case specifically, and he has improved wonderfully.

Inhalation of "Carbona."—A periodic drinker used the cleaning fluid "Carbona" to produce unconsciousness when inhaled. Carbona contains carbon tetrachlorid as its essential constituent; carbon disulphid being generally present also. Carbon tetrachlorid has been tried as a general anesthetic and found unsatisfactory. The carbon disulphid greatly increases its toxicity when inhaled.—*Jour. A. M. A.*, Aug. 9, 1924.

THE MODERN STATUS OF SINUS SURGERY.*

BY

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That the so-called conservative methods of sinus surgery have proven failures, can be inferred from the fact that the largest teaching clinics throughout Europe are slowly but surely joining the ranks of the more radical operators. We call them radical, merely because we have become accustomed to call anything new radical. In the degree of conservation of nasal function, these surgical procedures are more conservative than the old classical methods. If they are radical at all, it is only in the boldness of the attack, but not in the destruction of nasal function.

Hajeck, the father of sinus surgery, still adheres to the classical method of gaining access to the frontal and ethmoidal sinuses, by removing the anterior portion of the middle turbinate, which is a sacrifice of an important organ in nasal function. His ethmoidal operation still consists of attacking the ethmoid gradually, clearing out a few cells, then waiting a week or ten days, and if there is still pus, going a cell further, etc. This method is as wearisome to the surgeon as it is to the patient.

Halle began to develop his method of sinus surgery about eighteen years ago, and it took all these years for him to convince the rhinological world of the superiority of his method and results. In presenting these operations, I am merely describing them to you, as taught by Halle. After a fairly extensive experience in the method, I recommend it to you without hesitation, being firmly convinced that you will be more than gratified with the results.

I shall leave out the surgery of the maxillary sinus, in which, because of its accessibility and fairly simple structure, practically all of us feel thoroughly at home. If the operation is thorough, the results are uniformly good, mattering but little whether access is gained through the canine fossa or through the nose.

I shall devote this paper to the surgery of the ethmoidal and frontal sinuses, the technique of which differs entirely from our old methods, and the results of which are so satisfactory that the external operation is very rarely required.

The anesthesia is very important; it must be so thorough that the entire operation is painless. This is accomplished by blocking the nerves with novocaine and adrenalin. The posterior and anterior ethmoidal nerves are injected along the inner wall of the orbit; the infraorbital branch of the trigeminal, in the infraorbital foramen; the sphenopalatine ganglion and the second branch of the trigeminal is reached by placing the needle under the angle of the zygoma and directing it toward the sphenopalatine foramen, and an injection along the lower border of the apertura pyriformis serves to catch the lateral nasal branches. After these injections you can do any intranasal operation painlessly.

You begin the ethmoid by retracting the middle turbinate toward the septum. With a long pointed knife introduced under the middle turbinate at its posterior attachment, you make an incision along the attachment of the middle turbinate, cutting from behind forward. The knife should be pushed upward with caution, lest it enter the cranium; while usually the bone here is hard, it is occasionally found thin, and one may even encounter a dehiscence. Then you make another incision along the uncinate process, parallel to the first incision; the bulla ethmoidalis being thus placed between the two incisions. Under the anterior attachment of the middle turbinate, a vertical incision connects the two parallel incisions.

The entire ethmoidal labyrinth, which is situated between these incisions, is now cleared out with forceps and curetted. When this is thoroughly done, one sees above hard, shiny, white bone, which is the cranium. Often one finds spicules of bone crossing it transversely. These are the septa that separated the cells; it is safer to let them alone, as an attempt to remove them may result in a fracture into the cranium (this holds especially for old people). The next step consists in cleaning out the anterior ethmoidal cells under the agger nasi. Sometimes the agger itself consists of a cell. This is accomplished by throwing down a flap of mucous membrane from the agger, chiselling away the exposed agger and whatever cells and diseased tissue are found behind it.

This flap is outlined by an incision beginning in front of the anterior attachment of the middle turbinate, going up to the roof of the nose, along the roof of the nose to the apertura pyriformis, and along the aperture to the head of the inferior turbinate. This flap, with the attachment below, is elevated from the bone and pushed down; now you gently fracture with a chisel the attachment of the middle turbinate to the agger nasi, and chisel away the agger and exenterate the cells behind it.

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, May 1, 1924.

When the agger is chiseled away, the opening to the frontal sinus is exposed; the exposure and removal of the agger is therefore the first step in the intranasal frontal operation. The introduction of a medium-sized frontal sound will help to locate this opening, which may be easily confused with the openings of the anterior ethmoidal cells. A bridge of bone, spanning this opening and to the outside of it, is removed with a small chisel or a burr, which gives a direct view of the frontal sinus. In chiselling or burring this bridge of bone, one must remain in the upper and outer angle, thus avoiding injury to the cribriform plate, which is the most dangerous complication in this operation.

If you wish to attack the frontal and ethmoidal sinuses at the same time, as is often the case, it is safer to do the ethmoidal operation first, because the attachment of the middle turbinate to the agger nasi is the landmark for the anterior limit of the parallel ethmoid incisions; without this landmark one may cut too far forward and upward, thus endangering the cribriform plate, which may be injured with the curette. (This point can easily be demonstrated on the cadaver.)

The ethmoid labyrinth often has partitions which run parallel to the cranium, and which are frequently mistaken for it. This is very trying to the operator, because boldness may result in a fracture through the cranium, and fear may leave infected cells behind. To facilitate this, I follow this method: I first clean out the ethmoid cells without going dangerously high; then I remove the agger nasi and expose the frontal sinus. Above the opening to the frontal sinus is the highest point of the ethmoidal labyrinth, and you can safely curette from before backwards.

When the operation is over, the mucous membrane flap is replaced and a piece of loose gauze packed against it; it reattaches itself within twenty-four hours, leaving an opening into the frontal sinus, in front of the flap and behind the turbinate.

In this operation, the middle turbinate and the mucous membrane of the nose are preserved, and the middle turbinate serves as a landmark for the outer limit of the cribriform plate, so that as long as one stays to the outside of the attachment of the middle turbinate, one need not fear injury to the cribriform plate, with subsequent meningitis. While the dura may be exposed extensively in a mastoid operation with impunity, the slightest exposure of the dura in the region of the cribriform plate will invariably result in a meningitis. This is due to the rich

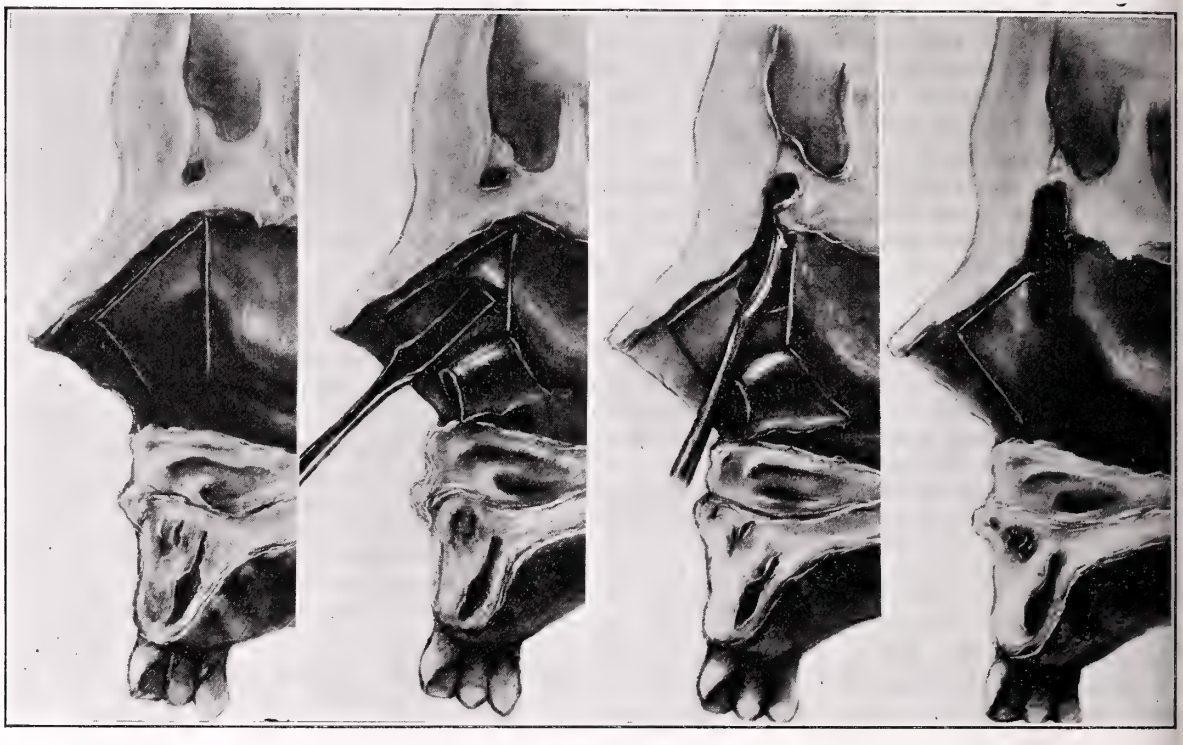

FIG. 1. Incision for the flap.

FIG. 2. The flap thrown down, and the exposed agger being chiseled away.

FIG. 3. The chiseling away of the upper and outer angle, thus enlarging the opening to the frontal foramen.

FIG. 4. The flap back in place and dipping in where the agger was before, and the direct opening to the frontal sinus over it.

lymphatic supply which accompanies the olfactory nerves from the nose into the brain. It also explains those rare cases of meningitis, following simple nasal operative procedures, in which an autopsy showed no fracture through the cranium.

One of my most interesting cases was a man fifty-two years old, who had a right-sided infection of the frontal, ethmoidal and maxillary sinuses. He had his first sinus operation twenty years ago, and was operated upon repeatedly in the conservative manner. His middle turbinate and some of the ethmoidal cells were gone. I first did the frontal sinus operation, and then proceeded to clean out the ethmoidal cells to the cranium, when I suddenly noticed a pulsating area about the size of a dime. I felt sure that the patient would die. I packed a piece of gauze around it and cleaned out the antrum, which was full of foul pus. In 24 hours I removed the gauze and covered the exposed area with iodoform powder. Much to my surprise the man made an uneventful recovery and was sent home on the sixth day. Four weeks later he had no discharge from the nose and the dura could not be seen. My explanation for his recovery is that he had probably had a bony dehiscence for a long time, and the dura was protected by old adhesions.

The external frontal operation is resorted to in those rare cases where the intranasal operation fails, as in old cases where one is convinced that a thorough curettage of the frontal sinus is indicated. In these cases a thorough intranasal operation is performed first, and the external operation is then done, also with local anesthesia. The intranasal flap is sutured to the orbital tissues, providing a mucous membrane lining for the opening. Only the floor of the frontal sinus is chiselled away, but one must assure himself that the entire mucous membrane has been cleaned away. I follow Marcheck's suggestion of making the incision not through the eyebrow but below it, which diminishes the deformity. It is important to leave the packing in the nose five or six days. If it is removed early, as is usually done, the tissues in the nose swell, and drainage is interfered with.

SUMMARY.

1. The difference between these operations and our classical operative procedures consists in the preservation of the middle turbinate, the removal of the agger nasi, and the thoroughness of the removal of diseased tissue at the first attempt.

2. The indications for these operations are the indications for any surgical interference with the sinuses.

3. When you are convinced, after trying local treatment, that the sinusitis will not clear up without surgical interference, do this operation instead of mutilating important nasal structures in the old classical way.

ABSTRACT OF DISCUSSION.

Dr. E. H. Cary, Dallas: This is a very valuable discussion and I want to agree with the essayist in principle. Anything which will enlarge your view is of great importance. I have found that it is wise in most cases to do a submucous operation first. You must know, if possible, the extent and range of the cells, hence an *x*-ray study should be made. The frontal sinuses vary in size considerably. The thoroughness of the operation is the key to success. Beck, and others, are trying all kinds of lights, etc., in the attempt to cure sinus disease without such extensive operations. From my own observation and experience, there are any number of cases which will not respond to the *x*-ray, or radium, or to light therapy. The way to get results is to be thorough and not leave a vestige of tissue which is inflammed, after which healing will be complete, without scabbing or other undesirable features. In dealing with patients from remote points, it is especially necessary to be thorough at the beginning.

Dr. J. H. Foster, Houston: I do not pack any nasal cases. The conditions are ideal for infection from packing the nose, and if you have packing in the nose two or three days, you practically always get infection. These cases do better without packing.

Dr. Frank D. Boyd, Fort Worth: Two years ago, I discussed a paper with regard to submucous work and I have come to the conclusion that packing is dangerous as it is easy to get infection. During the last few years, even in my submucous work, I never pack, because I had trouble when I used to do so. The *x*-ray picture is exceedingly important, because these frontal sinuses are very variable in shape and extent.

Dr. Frank W. Sorell, San Antonio: I am pleased with the manner in which the doctor has conserved the turbinates. Nose and throat surgeons have been entirely too radical in sacrificing the turbinates, forgetting that they have a double function to perform in the human economy, that is, to give warmth and moisture to the air we breathe. They also perform the function of adapting the nasal cavity to surrounding atmospheric conditions for the reception and assimilation of inspired air.

The function of the turbinates is as important to our physical welfare as is that of the skin, and should never be sacrificed except in extreme emergency and then only after we have exerted the best means known to medicine and surgery in trying to save them.

Dr. R. H. T. Mann, Texarkana: This operation is all right in the hands of men who have had a vast experience in learning the anatomical land marks of the nose, but I do not think the operation suitable for the average man. There have been many fatalities in Texas from intranasal operations. I said to a lady recently, "Madam, if you will have the anterior end of your middle turbinate removed, I think that it will cure your headaches." She said that her husband had heart disease, and that she was afraid to have the operation. She later had me to perform this operation on her nose. She told me later that a friend of her's had had a similar operation performed in another city, and that as a result of the operation, she sang at her friend's funeral.

Dr. Sidney Israel, Houston: Dr. Daily referred to packing the nose for four or five days. I would like

to know whether he changes the packing daily, or whether he leaves the same packing throughout the period.

Dr. Daily, (closing): This is not original. When I went to Europe I decided to master, among other things, sinus work. Most men going to Europe try to master sinus work, so there must be something about this work that is difficult for all of us.

I was fortunate in attending the International Oto-Laryngological Congress that met in Kissingen last year. Halle's methods of operations took up a prominent part on the program, and from the discussions, one could gather that he has many followers in Central Europe. Right after the Congress he went to Vienna, where he demonstrated his operations in Hajek's Clinic, at the latter's invitation.

The packing used is just enough to hold the flap of mucous membrane in place. In the combined operation, where you have sewed up the external incision, you leave the packing in place for five or six days.

UTERINE MALIGNANCIES TREATED BY CAUTERY, RADIUM AND *X*-RAY.*

BY

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During the past ten years, medical education has made rapid strides, not only among medical men, but among the people generally. Experience has shown that the public, when informed, usually takes advantage of what is offered it by the profession. Cancer education has been broadcast to the people of the world through the press and public addresses.

With this increased effort on the part of the profession to educate the public, there has come the realization of a greater responsibility upon the doctors to study more intensively in order to prepare themselves better to treat this dread disease. In recent years, the electric cautery, radium and *x*-ray have assumed an important role as surgical aids in treating cancer of the uterus, and are being used by some men instead of complete hysterectomy. More cancer cases are met with each year, due to greater interest in diagnosis in general and to recognition by the public of the dangers of irregular and unusual bleeding discharges. You are familiar with the fact that cancer of the uterus has been, and is now, a diagnosis which makes a patient's heart sink. Such patients have, in the past, had only a complete hysterectomy to look forward to, or else very unsatisfactory palliative treatment.

The cautery has been used for many years, chiefly from a palliative standpoint, but with the additional aid of radium and *x*-ray, not only are the hemorrhages, discharge and pain relieved, but in a large percentage of the extreme or inoperable and hopeless group, the cervix and vaginal wall can be made to heal.

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924.

The group of cases which the writer expects to discuss in this paper has been taken from our records, the first one being treated in April, 1920, and the last one August 8, 1923. This group consists of 63 cases, all of which had sections examined in the pathological laboratory; 61 of these were diagnosed as malignant, and 2 were diagnosed as precancerous.

When and how is a diagnosis of cancer of the uterus made? In going over the records, it is found that practically all of these patients either consulted their family doctor concerning some abnormal discharge, or went directly to a surgeon for the same reason. An occasional patient will be found who gives no history until after she is told she has cancer. A large percentage of the public believe that whites and leucorrhea, unless extreme, and also unusual bleeding from 35 to 50 years, is natural, and so hesitate to consult a physician during the most important time. This delay accounts for such a high percentage of cancers having developed to an inoperable stage when first seen by a doctor. The family physician or surgeon either prescribed for them without making an examination of the pelvis, in which case there was a possibility of overlooking something serious, or examined the pelvis, and his findings, taken in conjunction with the history of the case, led him to a probable or positive diagnosis of cancer. Hence, every woman with a discharge or unusual bleeding should be carefully examined.

At what age does uterine carcinoma occur? Of the 63 cases, 1 patient was in the twenties, 12 were in the thirties, 32 in the forties, 11 in the fifties, and 7 in the sixties. One out of the 63 is in keeping with the small percentage of cancer developing in the twenties. Among those in the thirties, one was 32, one 33, and the remaining ten were from 35 to 40. This age question, in my judgment, is the foundation upon which should be built the prevention of cancer of the cervix proper. Malignant conditions within the fundus are more difficult to ascertain and less dangerous in the final outcome. If every woman would have a speculum inspection of the cervix made each year after she was 35, very few serious cases of cancer would develop. Such a routine examination will undoubtedly never be resorted to, but if this practice were put into operation, it would be of inestimable value in the saving of thousands of lives each year.

Sixty-two of our patients had been married, there being only one unmarried woman. The number of children they had bourne ranged from none to 13, averaging five for each; it would therefore seem that child-bear-

ing does have some influence on the development of this disease, since there were only three nulliparae in this group.

The pathological diagnosis of the 63 cases was as follows: (1) Cancer of the fundus, 4; (2) sarcomatous degenerated fibroid, 2; (3) myosarcoma of the cervix, 1; (4) chorio-epithelioma of the fundus, 4; (5) precancerous, 2, and (6) cancer of the cervix, 50.

1. In the four cases of cancer of the fundus, hysterectomy has been performed in two cases; of the other two, one patient was considered so fleshy that an operation was not advisable. Upon dilating the cervix, at least a teacupful of cancerous material was evacuated spontaneously. The uterus was gently curetted, bringing away a considerable amount of cancerous material, and two applications of radium were used, 4,800 mg. hours and 2,400 mg. hours, ten days apart, making a total of 7,200 mg. hours. We did not see this patient any more after her treatment in August, 1920, but understand that she had very little further disturbance from the uterus, and died about a year later from an acute, gangrenous gall-bladder. One case, aged 67, was considered inoperable from the standpoint of hysterectomy. In February, 1921, she had 3,600 mg. hours of radium and, January 9, 1922, 1,200 mg. hours of radium. November, 1922, her condition was reported very satisfactory. Of the two cases hysterectomied, one patient had 1,200 mg. hours of radium in November, 1921, and a complete hysterectomy, December 6, 1921; the second patient had a hysterectomy, January, 1923, without previous radium, and she is perfectly well today.

2. One patient, aged 48, with a sarcomatous fibroid, had a curettage, January 24, 1921; February 5, 2,400 mg. hours of radium, and March 30, a complete hysterectomy, and is perfectly well today. The other had a hysterectomy, September 13, 1922, and is well today.

3. One patient, aged 47, on May 2, 1923, had extensive cautery of the cervix and 3,000 mg. hours of radium. The cervix was completely healed three months later, August 13, 1923, and her condition today is excellent.

4. Of the 4 cases of chorio-epithelioma, three had hysterectomies and died within a year. The fourth case had a primary complete hysterectomy, following curettement for prolonged flow after abortion. This was followed by deep *x*-ray therapy, and today, two years later, she is in very good condition, with no evidence of recurrence as yet.

Seven cases of cancer in 1920, after we began the use of radium, and not included in the 63 reported, were diagnosed as hopeless. Since 1920, we have treated all the cases that came to us, believing that the most extensive cases would get some benefit. Recent writers, though, are eliminating some of the very anaemic cases from treatment. This point is undoubtedly debatable.

5. Two cases were diagnosed as precancerous and are in excellent health following cautery and radium.

6. There were 50 cases of cancer of the cervix. This comprises the vast majority of the malignant conditions of the uterus in one series, there being 50 definitely proven cases out of the 63 treated, or 78 per cent. It is impossible for anyone not associated with the cases reported, to know the real extent of the pathology existing; indeed, it was difficult for the surgeon himself to know the exact extent, but in order that the reader may arrive at the best possible idea of the involvement, the writer has divided these cancers of the cervix into four clinical groups, depending upon the amount of cancerous invasion.

In the first group the the very early cancers, where the cells have just begun to change from normal into cancerous cells; in the second, are those cases where a diagnosis of cancer was made from inspection, the cancer being apparently limited to the cervix proper; in the third group are extensive cancers of the cervix, where no invasion of the vaginal wall was noted and no induration in the broad ligaments or pelvic masses were palpated; and in the fourth group, are those cases where induration in the broad ligaments or extension into the vaginal walls was noted.

In the handling of these patients, it is understood that the general condition, the renal, cardiac and blood findings, must be taken into consideration along with the other factors upon which treatment should be based, in addition to the malignancy itself.

In Group I, there were 8 cases, 7 of which were treated during the years 1920, 1921 and 1922. All of these cases are in excellent condition. Three had hysterectomies done in 1920 and 1921, and the 5 others had cautery, radium and *x*-ray, only.

In Group II, there were 6 cases, 5 of whom are in excellent condition; the sixth, a woman 67 years of age, did not carry out the treatment that was outlined, and died a year and a half later.

In Group III, there were 5 cases, 3 of whom are in excellent condition; one patient died. She had 2,400 mg. hours of radium April 27, 1921, and 1,200, June 7, 1921, and died a year later. One of those patients was treated in August, 1923, and so far is doing satisfactorily.

In Group IV, there were 31 cases, these including the so-called inoperable, very extensive, and "hopeless" cases. Twenty-three of these were treated during 1920, 1921 and 1922, and 16 have died. The remaining 8 have been treated from January 1 up to June 1, 1923, and 3 of them have died. Of the 19 that died, 1 lived two years, this being a very extensive case, whose pelvis was filled with carcinoma; 2 cases lived a year and a half; 1 case lived two years; 1 case during the first year had a perfect vaginal and cervical healing, with a return to normal weight and physical ability, and then developed a metastasis in the neck, and later in the pelvic glands, dying within six months after the metastasis appeared; 1 lived two years and ten months, dying of pelvic metastasis; 3 lived a year; and 8 died within a few months after their operative work. All of these patients had a combination of cautery, radium and deep *x*-ray therapy, and the majority of them had repeated radium treatments. In several cases, following the treatment, the cervix was obliterated and the vaginal wall healed and became smooth and pliable.

Seven of this group are in excellent condition. These seven patients have all been treated during 1922, and in all cases the vagina is soft and pliable and the cervix thoroughly healed. One of these patients had a metastasis in the vaginal wall which was excised two months after the primary work, and this patient is in perfect condition at present. These patients are taking the deep *x*-ray therapy as outlined by our *x*-ray department. There are 12 of the 31 living, 5 cases in 1923 were doing fairly well.

This fourth group, therefore, shows some interesting results, since 7 of the 23 cases of extensive carcinoma with palpable induration in the broad ligaments and invasion of the vaginal mucosa, are all in very good condition at the present time, one and a half years having elapsed since their primary work. Two of these 7 cases looked absolutely hopeless to us, and we were very much surprised to see them make the progress reported. As stated before, in 1920, 7 similar cases were not treated, being diagnosed as hopeless. This was during the early days of our use of radium, at which time we were more conservative than we are at present.

When there is a large amount of cancerous material present in the cervix, a bone curette has been used, in the majority of cases, to remove the cancerous tissue down to the firm base, and then the curetted area was thoroughly cauterized in some cases, and only partially cauterized in others. Iodine was then applied, and the radium used. An effort has been made to know how much time it took the cervix and vagina to be completely healed. Where radium alone was used, this time averaged six months; where cautery and radium were used, an average time of five and one-third months. In 25 cases, we have been unable to estimate the time for complete healing.

During the first two years of our work, the radium was used in varying amounts at intervals ranging from ten days up to several months. Our experience showed that some cases developed a radium sensitization, and when radium was used at a later date, a terrific inflammatory reaction followed, which had every appearance of rapidly spreading malignancy. Some of these cases have finally recovered. For the past year, radium has been used not over twice in the same case, usually only once, the second dose being given within ten to fourteen days after the primary treatment. With these single treatments, a larger dose is given, ranging from 2,400 to 4,800 mg. hours. The amount of cautery work and the placing of the radium, must naturally be left to the judgment of the operator in each individual case.

CONCLUSIONS.

1. If all women, and especially women who have borne children, would be examined at yearly intervals after the age of 35, very few extensive cancers of the cervix would develop.

2. Although the above quoted statistics and results do not extend over a sufficient length of time to be of more than partial value in deciding what is the best treatment for this type of pathology, it is our judgment that the combined use of cautery, radium and *x*-ray in cancer of the cervix, as compared with hysterectomy, offers a much better opportunity for relief and additional years of life. Surgeons in general have stopped doing hysterectomies for cancer of the cervix, *except in early cancer,* and each year we see more men relying on nonoperative methods. The main point of dispute, today, has narrowed down to whether a hysterectomy in early cancer, with or without radium and the *x*-ray as aids, offers greater hope to the patient than do cautery, radium and *x*-ray in different combinations.

3. Cancer of the fundus merits complete hysterectomy where other factors justify the operation. Chorio-epithelioma and sarcoma merit complete hysterectomy in the same manner, but where not advisable, radium, cautery and *x*-ray should be used. In all characters of cancer of the cervix and malignancy of the fundus, we have followed our work with deep *x*-ray therapy.

4. After three years of work, in which 61 cases of malignancies of the fundus and cervix were observed, and in 59 of which radium was used as a surgical adjunct, we have shown preference, even in very early cancer of the cervix, to cautery, radium and *x*-ray.

5. Because we have made a careful study of the resistance of the tissues in each individual case, in connection with the amount of cautery, radium and *x*-ray work which has been used up to the present time, we have been very fortunate in not having any bladder or rectal fistulae develop, to our knowledge. The menopause symptoms have been brought on more sharply and have passed away in the majority of cases within two years, and it is our opinion that they have not suffered in excess of the normal menopause symptoms from the use of radium.

6. The type of surgery producing best results is becoming more standardized each year, and so our greatest hope of lessening this dread disease is in educating the public to seek competent advice when leucorrhea exists, or as soon as abnormal or unusual bleeding is noted.

ABSTRACT OF DISCUSSION.

Dr. R. H. Crockett, San Antonio: At the malignancy clinics of Philadelphia and New York, the general opinion as to the use of the cautery, *x*-ray and radium in the treatment of uterine malignancies is about the same as that just outlined by Dr. Sherwood. Before the introduction of deep *x*-ray therapy, radium was used in larger quantities, both internally and externally. At the present time, smaller amounts of radium are being used internally, combined with the deep *x*-ray externally. Better results seem to be obtained when the deep *x*-ray is combined with radium than when radium is used alone.

Radium seems to give a more caustic effect locally on the malignant tissue, while the deep *x*-ray therapy controls the outlying glandular areas. The malignant cells, if not killed, may be surrounded by fibrous tissue, due to the reaction from the deep *x*-rays. This fibrous tissue, Dr. Ewing has suggested, may wall off the malignant cells, very much as in the case of tuberculous foci. Many cases have been reported cured for five years, which we hope will be permanent cures.

Many of the patients are so weak when first presented for treatment they are unable to receive sufficient treatment to be of any benefit. The use of about 1/3 erythema dose of deep *x*-ray every twenty-four hours seems to be better borne by the patient than if he is given heavy dosage at one sitting, and the results seem to be just as good.

Sagrotan.—A liquid composed of chlorcresol 8 per cent., chlorxylenol 4 per cent., soap 22 per cent., alcohol 9 per cent. and water 57 per cent. Sagrotan is an antiseptic and germicide. The germicidal efficiency of sagrotan is stated to be 2.5 times that of an equal quantity of phenol. While the germicidal efficiency of sagrotan is almost equal to that of compound solution of Cresol U. S. P., it has the advantage over this perparation in that it is almost odorless; also, it is claimed to be less toxic. Lehn and Fink, New York.

INDIGESTION AND RIGHT-SIDED PAIN FROM A ROENTGENOLOGICAL STANDPOINT.*

BY

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Many years ago, I began trying to solve the problem of why there was so much more appendicitis per capita than half a century ago, or even twenty-five years ago, and why so much indigestion and so many cases of continued right-sided pain following appendectomies. Why did surgery fail to cure them? Certain theorizers declared that we are now making hair-splitting diagnoses that we formerly did not make, and that this accounts for our increased number of appendiceal involvements. Formerly, most abdominal conditions were classified as locked bowels or peritonitis. Better diagnostic ability enabled us to really diagnose appendicitis or perityphlitis. A later cause given for the increased number of cases of abdominal disease was dietary errors. I thought the latter theory was more nearly correct, but still I could not be satisfied with either theory, or both combined, as being the sole cause for the increased number of cases of right-sided pain and indigestion.

Many patients of mine, who had suffered from appendicitis for a number of months or years, were finally operated upon, without any apparent relief. Some had so much trouble that they would seek relief by a second and perhaps a third operation. "Why don't my case get well?" I would ask, and the answer would be, "Adhesions." I should like to state here, that if one cannot find a better alibi than adhesions (unless there are actual obstructive symptoms), he had better stay out of the abdomen.

The longer I remained in the practice of medicine the more interested I became in digestive symptoms and abdominal pain. Upon entering the field of Roentgen investigation, I began to see the light, and to attempt to answer some of the questions I had been propounding to myself and to my colleagues. I began to see how many people develop appendicitis, gastric ulcer and biliary disease because of a diseased colon. Long ago, I decided in my own mind that the appendix was not often independently and primarily diseased and that appendicitis was most always caused by a diseased caecum, or perhaps an extension from other parts of the colon. I also began to see why after removal of the

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appendix, duodenal and gastric ulcer, and gall-bladder and renal disease, so often followed.

It has long been obvious that once one enters upon an abdominal pilgrimage there is no telling when or where the journey will end, and finally the victim falls into the hands of the cultist or the charlatan. The excuse given by the patient is that he had undergone from two to six operation, and had been seen by at least half a score of doctors, no two of whom agreed on his case.

Osler recognized the colon as a hotbed of rebellion and wished it were possible for man to dispense with it. About this time, Lane had an inspiration to short circuit the colon, and later rid us of it, but the mortality was so high that this practice did not become very popular. We must, however, admire Lane and his followers for their dogged determination, because it was these men who furnished the starting point for Waugh, and for Dott and McConnell, in their investigation of the colon. Waugh devised an operation upon the caecum for the relief of right-sided pain, constipation, etc.

McConnell and Dott's masterpiece was their excellent work upon congenital, malposed or nonrotated caecums. It would appear from their investigations that most of the diseases of the caecum, which produce indigestion, right-sided pain, etc., are the result of congenital anomalies. At any rate, whether the condition is congenital, or acquired, we should inform ourselves upon the subject and avoid the many past failures.

In studying those cases that have been operated for so-called chronic appendicitis, but in which the right-sided pain, drag, or burning remains, we often find the right or hepatic flexure lower than the iliac crest, with the tip of the caecum as low as the symphysis pubis when the patient is in the upright position. If the patient has had no severe inflammation in the pelvis which would cause adhesions, the viscera should rise up in the pelvis from three to five inches when he is placed in the recumbent position. These observations are made from 12 to 24 hours after an opaque meal is administered. (I wish to pause here to condemn the use of the opaque enema in the diagnosis of the ptosed colon. It will not give a correct knowledge of the real position of the colon, since the distension causes more or less pain and abnormally excites certain reflexes which will raise the bowel out of its usual plane.) Some patients without any history of pelvic inflammation, have the caecum tied so low in the pelvis that it cannot be raised out, and the right flexure is lower than the crest of the ilium in the vertical position. Because of such fixation, the caecum and colon cannot rise even when these patients are recumbent. This cannot be explained in all cases as the result of tubal and ovarian trouble, for some of these victims are male. Dysentery, diarrhea, or typhoid, occurring in childhood, could have caused such fixations.

Most of these patients who have not been operated, have a very mobile colon, many of which possess so little mesenteric attachment that the caecum can be pushed to the median line and upward to to a point two or more inches above the crest of ilium. In making these examinations, I make röentgenograms of the patient in the recumbent position after the abdomen has been freely palpated to assist the viscera in finding their usual position. The upright position should be maintained for a few minutes before making radiograms in this position, so as to allow the viscera to find their lowest plane. A fluoroscopic examination is also made with the patient in the recumbent position, in order to see with what ease the colon is moved, either under pressure or by the excursion of the diaphragm upon deep breathing. The fluoroscopic examination is often more important than the radiograms.

You may ask, "Why does this mobile caecum and ptosis produce such an array of abdominal diseases and symptoms?" When the right flexure is dropped below the normal point a severe strain is made upon the mesentery. When traction is made upon the mesentery, inhibitory influences are produced by disturbances of the vagus and the pelvic nerves. If the pull is acute, the symptoms are very obvious; if chronic or slowly brought on, we may expect the symptoms to be manifested in many obscure ways. Whether this ptosis of the right flexure is congenital or acquired, if it descends into the pelvis the mesentery no longer shields and protects the nerve supply, but the nerves are put on a stretch causing inhibitory influences to all normal peristaltic action of the entire intestinal tract, and thereby causing stagnation and constipation as a result of overloading of the colon. Finally, the weight of the ptosed and overloaded colon, is sufficient to pull down the right kidney and the pylorus, producing symptoms whose etiology has heretofore been obscure.

Possibly all floating right kidneys are due to the traction of an overloaded colon. A great number of kidney fixations have proven a failure because nothing was done to correct the ptosed colon and mobile caecum; and the colon which pulled it down formerly, pulled it down again of gastric and duodenal

ulcers. The surgeon and the internist have often been disappointed that so little good resulted from surgical interference or medical treatment because the etiological factors were not known and hence not treated.

To explain how trouble arises further up in the gastrointestinal tract after an appendix has been removed, I invite your attention to Gray's explanation of the lymphatic circulation draining the ileocaecal area. Braithwait, in the July, 1923, British Journal of Surgery, has written a wonderful essay entitled, "The Lymph From the Ileocaecal Angle." When there is a constant pull upon the right colon, thereby causing stagnation in the ileocaecal area through inhibition with a constant pollution of the lymph-channels draining this area, it is easy to see why gastric ulcer and gall-bladder disease may develop in a certain class of cases that have a low right flexure and mobile caecum.

I have recently examined three hundred well people—well enough to be at work or in college, many of whom had undergone appendectomies without relief. There were no adhesions, but the right-sided pain and digestive disturbances remain, because of a ptosed colon with the resultant toxemia, the ptosed kidney and the angulated and obstructed duodenum caused by the pull of the superior mesenteric artery. I felt that to study only "ill people" would not sufficiently aid me in my research, and so I determined to ask the assistance of well people who were interested in science and preventive medicine and surgery. I desire, at this time, to thank the nurses of the Central Texas Baptist Sanitarium, the students of Central Texas College (colored), the students of Baylor University, and the members of the Carpenters' Union, of Waco, who assisted me in my research work on the digestive tract.

In the study of these cases, I learned that my former conceptions of the behavior of the stomach needed to be severely revised. Habits, exercise, environment, temperament and foods, all influence the proper emptying of the stomach, and are therefore bound to shape the state of one's health.

Primarily, we intended to study only the colon in this series of well people but, before we had gone a great way, our attention was drawn to the fact that 33 per cent of a certain class of our subjects, were retaining barium in the stomach for more than twelve hours. The residue was in some cases half, and in some a fourth of the amount ingested, so I am sure that at least four hours more would have been required to clear the stomach of barium.

The larger part of these hypomotile stomachs were among the well-to-do, idle, non-exercising class. A small percentage of those who were exercising vigorously either through manual labor or in the gymasium, also showed a 12-hour gastric residue and many of them had no other digestive disturbance than constipation. Only two out of two hundred, where the stomach and right flexure of colon was swung high in the abdominal cavity, had any gastric residue; 8 per cent of the working students, 6 per cent of the working men (all of these had chest disease), and 4 per cent of the negro subjects, had a 12-hour retention.

From the above study I desire to make the following observations:

Perhaps 25 per cent of our studies come within the class of "Ptosed colon and mobile caecum." Those who eat a milk and vegetable diet with a minimum of sweets and meats and a restricted amount of starches, such as bread, potatoes, etc., and who are laboring or taking a lot of exercise, are having less stomach retention and bowel stagnation, than those who indulge in a modern twentieth century mode of living, namely a too high caloric food value and no exercise. There were many whose colonic attachments might be classed as fairly normal who were among the 33 per cent showing a 12-hour retention. There was a certain percentage who were decidedly in the ptosed colon and mobile caecum class and yet whose stomachs were emptying on time, and who were not noticeably constipated. The majority of these had sensed their trouble and were sticking to diet and exercise, and so were fairly comfortable. Some had been operated without relief, and had found out that an active life and suitable diet made them comfortable. Another group whose stomachs were slow emptying, had no symptoms. These fellows will probably show digestive disturbances, appendicitis, etc., a little later.

Gastric retentions over a period of 6 to 12 hours do not, to me, necessarily mean a gastric ulcer. Duodenal stasis or duodenal ileus does not always mean an ulcer. It may be the result of gall-bladder adhesions. If the stomach and colon are both ptosed, the megaduodenum is in all probability due to the duodenum being pressed between the superior mesenteric artery and the vertebrae. Even where there is no duodenal obstruction, the inhibitory influences brought to bear upon the vagus by the heavy pull of the loaded colon upon the mesentery, is sufficient to close the pyloric outlet and produce a spastic constipation. As this condition wears on over a period of years, the putrefactive materials finally produce an irritation of the mucosa, later involving the deeper lymph-glands. Thus sufficient toxemia may be

present in the lymph-glands draining the right colonic flexure, the duodenum and the gall-bladder, to also produce enough inhibitory influences to paralize the vagus and to activate the sympathetic nervous system, which would create a spastic pylorus and colon.

In my series, the right flexure will average about one inch above the iliac crest, when the patient is in vertical position. Only two whose right colon and caecum were in a strictly normal position, had any indigestion or constipation. The person who takes a minimum of concentrated sweets has a better emptying time than the one who indulges freely in sweets. The laborer has less stasis than the sedentary individual. About 25 per cent of my studies showed low colons, which McConnell is pleased to say are due to faulty rotations, or malposed caecums. About 1 1/2 per cent of my patients in this series, showed anomalies, the appendix being on the left side. I believe that the McBurney incision is an incorrect point from which to attack in appendectomies.

I am thoroughly convinced that it is bad surgery to open a chronic abdomen without a thorough, competent röentgenological study. From my close observation on these cases with indefinite, right-sided pain, which covers some years, I believe they are subjects first, for röentgen study and then corrective diet and physiotherapy. If this does not give relief, Waugh's colon suspension operation may be indicated. I have seen many of these patients, after such treatment, lose their frown, stop complaining and gain many pounds of flesh within a few months, and again take their places in the home and society.

For want of knowledge of what else to do and a lack of satisfactory technique, many good men have opened the abdomens of so-called neurasthenics, and removed "chronic appendices," with no relief following. It is most regrettable to see medical men who have lost sight of the real fundamental principles in healing the sick—diet, exercise, sunshine and fresh air. These are our greatest agencies for the recuperation of the ill. In our mad rush to perfect aseptic methods and technique in operating, and to discover specifics in medicine, we have gone far afield, and the public is suffering in consequence. The miraculous results following the administration of 606 in tertiary lues; the snatching from the jaws of death by the surgeon, of one who had a perforated appendix or a ruptured tubal pregnancy, has fertilized the lay mind for the reception of our past behavior. I think that most physicians have their patients welfare at heart, and are willing to do anything that will bring relief. But I do believe, from my studies of the literature and my own personal observations, that much useless and bad surgery has been done in the past, and that now, with the present light before you, you can take many of these patients from the scrap-heap and can enable them to again take their places in society.

If a diet and exercise can be had that will empty the colon each 24 hours, many of these ptosed colons will clear of right-sided pain and digestive disturbances. When diet, an abundance of exercise and physiotherapy will not correct digestive disturbances and constipation where anomalies of the colon exit, the patient should have the benefit of surgical intervention, so that the colon may be restored to a position in which the vagus will be released and again allow a normal gastrointestinal peristalsis.

Correct food, exercise, relaxation, sunshine and fresh air should be foremost in everyone's life, as these are the balance of power, in the majority of us, between health and disease.

CONCLUSIONS.

1. Concentrated food and lack of active, outdoor life have brought increased diseases of the digestive tube, as such food contains no residue (no house-cleaner), and everything favors fermentation and putrefaction in the colon.

2. The resultant toxins serve to give the sympathetic nervous system full control and contribute further to inhibitory influences of normal peristalsis, producing in most cases an obstinate constipation.

3. A sagging colon and a mobile caecum are responsible in most cases for (a) colitis, (b) megaduodenum, (c) duodenal and gastric ulcer, (d) gall-bladder disease, (e) movable right kidney, (f) pancretitis and (g) appendicitis. In my series of studies of the colon in "well people," only two with normal colons had any digestive disturbances.

4. There were many who had mobile caecums and ptosed colons, and were not complaining, but the people who complained the most, were those with right colonic flexures below the iliac crest.

5. We have had these anomalies, perhaps, since we assumed the standing posture.

6. The time is most here, it seems, when chronic abdomens will not be opened without first having röentgen investigation.

ABSTRACT OF DISCUSSION.

Dr. O. J. Potthast, San Antonio: I regret that this paper could not be read before the surgical section also, for it is surprising how few surgeons really understand this subject. This excellent paper is worthy of a great deal of thought and study. There is a well-grounded prejudice against operations for

ptosis—operations that were done upon the stomach without understanding that the fundamental cause of ptosis is incomplete rotation or prenatal peritoneal fusion of the large bowel, and with proper conception of the shape and capacity of the abdominal cavity, or consideration of the carriage of the patient. As a class, these patients are much maligned. They are, as stated by Dr. Jenkins, subject to "nervous indigestion," "bilious headaches," constipation, mucous colitis, etc. Often they suffer from a floating kidney, due to the weight of the improperly fixed colon, dragging on the kidney. Many cases can be relieved by fattening them by forced feeding. In selected cases, a properly done operation is indicated, taking into consideration, however, that the operation is just one step in the treatment. Ptotic patients cannot be let out of bed as early as other abdominal cases.

I disagree with the doctor on the use of the McBurney incision for appendicitis, especially for acute cases. In pus cases, this incision is usually directly over the abscess. It is a perfect anatomical incision. If you haven't enough room, the incision can be extended across the rectus in the line of the nerves, or another incision in the midline can be made. In my rather limited experience, I have never seen a hernia following a McBurney incision (even with drainage), nor when the incision was extended across the rectus without cutting any nerves. But I have seen a number of hernias following lateral rectus incisions, especially when the incision was lengthy and more than one nerve was cut. In chronic cases where you are not sure of your pathology, a midline incision is better.

Dr. Jenkins (closing): My studies on well people have convinced me that proper food and proper exercise may determine the state of one's health. The greater part of man's illnesses are penalties for wrong living. If the colon is already crippled from a congenital malposition, the patient is sure to come to a breakdown in health sooner or later. Such a breakdown may be manifested by anything from appendicitis to neurasthenia. I cannot too strongly emphasize the need of thorough *x*-ray examination of the gastro-intestinal tract in all abdominal conditions that are not real emergencies.

MISCELLANEOUS

EVIDENCE THAT INSULIN DOES NOT PROMOTE FERMENTATION.

It has been characteristic of the development of our knowledge of various hormones that information regarding what they can accomplish has often long preceded a rational understanding of how they really act in the organism. This is conspicuously true, for example, of epinephrin, thyroxin and insulin. The last of these, the pancreatic hormone, being the latest to engage the attention of scientists, is at present still the subject of lively discussion from many directions. Broadly speaking, insulin facilitates the utilization of sugar in the metabolism: it renders glucose physiologically available in persons that lack the capacity in greater or lesser degree to benefit by processes in which the carbohydrate normally plays a significant part. To express the function of insulin in this way is, however, far from "explaining" the details of its biochemical performance. Does it liberate something that directly facilitates carbohydrate breakdown? Does it merely promote the normal cellular oxidate changes as a stimulating drug might? Or does it somehow render the sugar molecule more susceptible to chemical disintegration? The last hypothesis has been particularly popular. Many students of the metabolism of the carbohydrates have assumed an analogy between the behavior of sugar in fermentation and its physiologic transformation in the living body. This lends interest to a recent study of the influence of insulin on the rate of fermentation of glucose by yeast. The demonstrated failure to alter the rate of destruction of the sugar in this way may be regarded as evidence in favor of the view that the action of insulin is not on the glucose molecule itself. At any rate, any one would expect that if the sugar was altered by contact with the hormone, some change in the rate of fermentation would manifest itself. The burden of proof that insulin in some way alters the configuration or structure of the glucose molecule, is gradually being shifted to the shoulders of those who have believed in this explanation of a remarkable biochemical property.—*Jour. A. M. A.*, Sept. 6, 1924.

TEXAS STATE BOARD EXAMINATIONS.

The Texas State Board of Medical Examiners will examine applicants for license to practice medicine and surgery in this State, at the Adolphus Hotel, Dallas, November 18-20, 1924. Citizenship in the United States, or a declaration of intention to become a citizen, with presentation of "first papers," will be required of all applicants for license to practice in Texas. Medical students who present certified credit for the Freshman and Sophomore years of a reputable medical college, may be admitted to the examinations on anatomy, physiology, histology, pathology, bacteriology and chemistry. Those who make a general average of 75 on these subjects will not be required to repeat them in their final examination. A grade below 50 on any subject will constitute a failure, regardless of the general average made. The fee ($25.50 for full examination, and $15.00 for the partial examination) should be inclosed with the application to the Secretary of the Board, not later than November 15. Only cash, certified checks or postoffice or express money orders, will be accepted.

The following is the schedule of examinations:

November 18, 9:00 a. m., Inspection of Diplomas; 10:00 a. m., Anatomy; 1:45 p. m., Physiology; 4:00 p. m., Chemistry; 8:00 p. m., Histology.

November 19, 8:00 a. m., Bacteriology; 10:15 a. m., Pathology; 1:45 p. m., Surgery; 4:00 p. m., Diagnosis.

November 20, 8:00 a. m., Hygiene; 10:15 a. m., Gynecology; 1:45 p. m., Obstetrics; 4:00 p. m., Jurisprudence.

GASTRO-INTESTINAL SYMPTOMS AND EPIGASTRIC HERNIA.

Hernia in the linea alba has often been confused with gastric and duodenal ulcer, and sometimes the two conditions exist at the same time. The presence of a tumor or slitlike opening in the linea alba, with or without the protrusion of a small mass on coughing, will help to establish a diagnosis of hernia.

In ulcer the symptoms come on at a certain interval after eating, while in hernia the paroxysmal attacks have no relation to meals but usually follow physical exertion, and the patient finds the most relief is secured by assuming a doubled up position, which relaxes the linea alba—when the omentum slips back into the abdominal cavity the pain disappears. Epigastric hernia must also be distinguished from cholelithiasis, cholecystitis, gastralgia, gastritis, carcinoma, sarcoma, appendicitis, nephrolithiasis, abscess or tubor of the abdominal wall, and the gastric crises of tabes.—Leigh F. Watson: *New York Medical Journal and Record*, April 16, 1924.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Holocaine Ointment-M. E. S. Co.—Composed of holocaine (see New and Nonofficial Remedies, 1924, p. 35) 1 per cent., water 1 per cent., wool fat and petrolatum 98 per cent. Put up in collapsible tubes for application to the eye. Manhattan Eye Salve Co., Louisville, Ky.—*Jour. A. M. A.*, Aug. 2, 1924.

Silver Salvarsan, 0.6 Gm Ampules.—Each ampule contains silver-salvarsan (see New and Nonofficial Remedies, 1924, p. 54) 0.6 gm. H. A. Metz Laboratories, New York.

Diphtheria Toxin-Antitoxin Mixture 0.1 L+.—A diphtheria toxin-antitoxin mixture (see New and Nonofficial Remedies, 1924, p. 299), each c.c. representing 0.1 L+ dose, of diphtheria toxin, neutralized with the required amount of antitoxin. It is marketed in packages of three bulbs, each containing 1 c.c.; also in vials containing 20 c.c. Parke, Davis & Co., Detroit.—*Jour. A. M. A.*, Aug. 16, 1924.

Procaine-Epinephrine Ampules, 1 Cc.—Procaine-Abbott, 0.02 Gm., epinephrine 0.00004 Gm. in Ringer solution, 1 Cc. The Abbott Laboratories, Chicago. —*Jour. A. M. A.*, April 12, 1924.

PROPAGANDA FOR REFORM.

More Misbranded Nostrums.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: De Witt's Kidney and Bladder Pills (E. C. De Witt & Co.), consisting essentially of methylene blue, potassium nitrate and plant material, including a volatile oil such as juniper oil. Foster's Backache Kidney Pills (Porto Rico Drug Co.), consisting of potassium nitrate, rosin, fenugreek, uva ursi and an essential oil such as juniper. Glycofostina (Henry S. Wampole Co., Baltimore), consisting essentially of strychnin sulphate, sodium calcium and potassium glycerophosphate, alcohol and water.—*Jour. A. M. A.*, Aug. 2, 1924.

Rectal Administration of Digitalis.—Digitalis is absorbed rapidly and fairly uniformly from the alimentary tract of man, although some substances in the digitalis group, notably strophanthus products, are unsuited for oral administration. However, nausea, vomiting or surgical operations may sometimes interfere with the use of digitalis by mouth. For such emergencies digitalis may be satisfactorily administered by rectum. In many patients with auricular fibrillation, the results have been rapid and beneficial. Rectal digitalis therapy is not intended to supplant the well established oral methods of administration, but rather to be used as an emergency measure when the customary mode of introduction is not feasible.—*Jour. A. M. A.*, Aug. 9, 1924.

Sun and Moon Oil and Ointment.—Alfred W. Lowrie of Hartford, Conn., an alleged divine healer, mixes religion with his quackery. In a publication by him he is said to have died once, and while dead was ushered into the presence of the Supreme Being. While in heaven, Lowrie was presented with the "key to knowledge," to be used by him when he returned to earth. After Lowrie's visit to heaven, he seems to have started making what he is pleased to call "Sun and Moon Sacred Ointment" and "Sun and Moon Sacred Anointing Oil." The ointment is claimed to contain "vibrations of life from the radio-activity of electricity, magnetism, electrons and atoms." The ointment is to be used externally and internally for a variety of ailments. The A. M. A. Chemical Laboratory found the composition of the ointment to be essentially: petrolatum 75.50 per cent., saponifiable fat 17.20 per cent., methyl salicylate 4.00 per cent., "dirt" 0.15 per cent., oil of sassafras, water and undetermined 3.15 per cent. The "sacred oil" is for external and internal use. It was claimed to have no equal for tired and sore feet, rheumatism, neuritis, lameness, hardening of the arteries and nerves, broken bones, skin diseases and other conditions. The A. M. A. Chemical Laboratory found the oil to consist essentially of fixed oil (probably olive oil) 87 per cent., methyl salicylate 5 per cent., oil of sassafras 1 per cent., alcohol 2 per cent., water and vegetable extractive 5 per cent.—*Jour. A. M. A.*, August 9, 1924.

Anaphylactoid Phenomena and Modern Therapy.—Anaphylaxis is that state of hypersusceptibility to a given substance which has been induced by a previous injection of the same substance. The reaction is limited to substances of a protein nature. A considerable variety of chemically unrelated substances may produce "anaphylactoid" symptoms after intravenous injection by virtue of their causing occlusion of the pulmonary capillaries by thrombosis or by agglutinated corpuscles or platelets. Some of the substances which may produce anaphylactoid phenomena have been widely proposed for intravenous therapy, including a variety of "colloidal" solutions of iron, mercury, arsenic, antimony and protein, as well as extracts of animal tissues. In consideration of the possibility of anaphylactoid reactions being induced by such substances, it is well to reiterate that there seems to be little, if any, justification for the intravenous administration of such agents as hexamethylenamin, sodium iodid, and sodium salicylate, because their systemic effects are readily obtained by oral administration.—*Jour. A. M. A.*, Aug. 23, 1924.

More Misbranded Nostrums.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Doane's Kidney Pills (Foster-Milburn Co.), consisting essentially of potassium nitrate, ground leaves of uva ursi, a trace of volatile oil such as turpentine or juniper oil, a resin, starch, sugar and talc. (For years the advertising of "Doane's Kidney Pills" has long been an offense against the public health. Its advertising methods have been such as to frighten the public into the belief that pain or soreness in the lumbar region is indicative of kidney disease.) Lafayette Headache Powders (Lafayette Co.), consisting essentially of acetanilid, caffein, sodium bicarbonate and aromatics, including cinnamon and ginger. Grogan Mineral Water (Grogan Wells and Boone Institute of Massage), containing large numbers of bacteria and gas-forming organisms, indicating that the water was polluted.—*Jour. A. M. A.*, Aug. 23, 1924.

Fatal Anaphylaxis from Hemostatic Preparations.—Recently, a death was reported which was caused by the injection of a hemostatic preparation. It was discovered afterwards that the patient was a sufferer from asthma and that the attacks were elicited even by the mere approach of a horse. Because of the importance of determining the anaphylactic possibilities of the various blood coagulants, the Council on Pharmacy and Chemistry had specimens of the following preparations examined: Coagulen-Ciba, Fibrogen-Merrell, Hemagulen-Lilly, Kephalin-Armour, Hemostatic Serum Lapenta (Hemoplastin)-P. D. and Co., Thromboplastin-Lederle, Thromboplastin-Squibb, Thromboplastin Hypodermic-Squibb, Thromboplastin Solution-Armour, Precipitated Horse Serum, (Coagulose)-P. D. and Co. It was found that all of the specimens contained animal protein (in most cases horse or beef protein was present). In most cases the labels and descriptive literature did not state the precise nature of the coagulant. Since blood coagu-

lants are usually administered as an emergency measure, physicians may overlook the danger and introduce these foreign proteins into a hypersensitive person. The Council recommends that all hemoplastic preparations be labeled to show the composition of the product, the character of the protein present, and to contain information which will cause the physician to inquire into the patient's history to learn if hypersensitivity exists.—*Jour. A. M. A.*, Aug. 30, 1924.

NEWS

Chiropractor Charged With Murder.—Mack MacGregor, who claims to be a chiropractor, was arrested August 19, in Bowling Green on advice from the sheriff at Gunterville, Ala., charged with murder in the second degree, it is reported. MacGregor was tried about a month ago at Bowling Green on a charge of practicing chiropractic without a license.—*Jour. A. M. A.*

A City-County Hospital for Lamar County.—A petition has been signed by all practicing physicians of Lamar County and by about 2,000 other qualified voters, asking for the issuance of bonds to the amount of $125,000 for the purpose of erecting and equipping a City and County Hospital for the care of the indigent sick. If the bonds are issued, the building will be erected on the site now occupied by the Aiken Hospital. It is not expected that there will be any serious opposition to the issuance of the bonds.—*Fort Worth Star-Telegram.*

Doctors Practice What They Preach, subconsciously, at least, says *Hygeia*, the A. M. A. popular health magazine, as shown by a recent physical examination submitted to by 91 members of the Kings County Medical Society, Brooklyn, N. Y. They were found to be in better general health than other members of the community of corresponding age. The general conclusion was reached that physicians, in spite of their irregular hours of eating and sleeping, achieve good health by taking better care of their mouths than the general public, avoiding constipation, and by taking many little common sense precautions that the average individual is prone to neglect.

Sirens for Doctors' Automobiles.—In Rock Island, Illinois, the introduction of an ordinance is contemplated, requiring every physician's automobile to be equipped with a siren horn. Various localities have adopted different means of marking physicians' cars in order that certain privileges, such as parking in places where there are time restrictions, speeding in emergency cases, etc., may be extended to the doctors by the traffic officers. Some cities have adopted the policy of issuing numbered licenses to physicians, as the Caduceus has been placed on many cars that are not operated by physicians, and hence many individuals have been accorded privileges intended to be extended only to the doctors.

An International Health Society is soon to be organized as a result of the recent visit of public health officers to England, to study English public health methods. A provisional committee, composed of doctors from Great Britain, Russia, France, Germany, Poland, Italy and Ecuador, has been selected to draw up the constitution. The society will have its headquarters at Geneva, and all public health officers who already have taken part in league interchanges (240 from forty-three different countries) will be invited to become original members.

Many of these doctors have not so far been interested in the work of the League of Nations, but their society will have as its principal object development of the league's health organization. Members of the new society also will exchange information on preventive medicine and all matters of public health.—*Dallas News.*

Faith "Cures."—A study of alleged faith "cures" was made by a committee composed of eight physicians, eleven ministers, three university professors and one lawyer, appointed by the General Ministerial Association of Vancouver "to inquire into the authenticity of the alleged cures and present the conclusions which they drew from the facts." According to *The Survey*, 350 persons, supposedly "cured," whose ailments covered a list of more than sixty diseases and deformities, were investigated. Of this number of patients, five had been so distinctly benefited that at the end of six months they could be regarded honestly as cured. Thirty-eight patients showed improvements; 212, no change, although at the time of "anointing" they had been declared cured. Seventeen patients were distinctly worse. Thirty-nine had died and five of the persons "anointed" had become insane.—*Jour. A. M. A.*

Women Oppose Maternity Act.—The American Federation of Democratic Women and the Women's Constitutional League of Maryland have both asked the State Legislature to refuse to coöperate with the Federal Maternity Act. The latter organization said in part: "We think that this bureau has disregarded the established methods which have built up public health work in the counties, methods that have gained the support and appealed to the pride and interest of the people, giving them, in addition to general health work, help and instruction in maternal and child hygiene which can never be divorced successfully from general health problems. Instead of building on this foundation, however, a separate bureau has been established and separate nurses have been employed, these nurses receiving higher salaries than those paid to other public health nurses, thus tending to break down the morale of those who have been giving faithful service for smaller compensations."—*Jour. A. M. A.*

A Warning.—The medical profession is being circularized by one, Reverend Helmuth M. Brinckmann, who describes himself as "Director of the American Rhine Ruhr Relief," with headquarters at 405 West 125th St., New York City. He is appealing to several thousand physicians to send in at least $1.00 each. Just why the Reverend Brinckmann is circularizing physicians rather than ministers is not quite clear. According to *The Journal of the A. M. A.*, he has admitted that "No one is actively associated with me in soliciting the funds. I, myself, superintend my mail campaigns, preach in churches and call upon individuals who have indicated their sympathy with my work." It would rather behoove the medical profession to think about this before sending in contributions to this cause. However laudable the enterprise, the public has a right to expect that money for such purposes should be handled by a responsible committee that will prepare and publish an account of receipts and expenditures, audited by qualified auditors.

SOCIETY NEWS

Dallas County Medical Society met September 11, 1924, with 47 members and 5 visitors present.

Dr. C. M. Rosser reported a case of congenital umbilical hernia, upon which he had operated twelve hours after birth. There was a protrusion about the size of an orange through an opening about an inch and a half in diameter. A radical anatomical closure was made and for four days the patient's con-

dition appeared very favorable, but the child died on the tenth or twelfth day, apparently from inanition.

Dr. George L. Carlisle reported the case of a negro boy, 8 years of age, who had general body pain and continuous fever. The illness very much resembled miliary tuberculosis. Autopsy revealed tuberculosis of the lymphatic system, the lungs being slightly involved. Tubercles were found in the capsule of the spleen, in the liver and in the kidney. The cerebrospinal fluid showed tubercle bacilli in large numbers.

Dr. Roy Goggans reported the case of a negro man, 45 years of age, who was admitted to the hospital suffering with dyspnoea, hoarseness, aphonia and a slight hemorrhage from the lungs. His temperature ranged as high as 102 for several days. The patient was sent to a sanitarium under the supposition that he had tuberculosis. Examination of the chest revealed an area of dullness on the left side. There was increased vocal fremitus. No rales were heard. There was also dullness over the base of the left lung. An exploratory needle revealed a collapsed condition of the lung. There was a tumor mass in the region of the arch of the aorta. Tracheal tug could not be elicited. The radiograms showed an aneurysm as large as a grapefruit. The blood Wassermann was positive.

Dr. John G. McLaurin read a paper entitled, "Unilateral Exophthalmus."

Dr. J. H. Black read a paper on "Hay Fever Pollens," which was discussed by Dr. H. I. Gosline.

Drs. Jas. T. Montgomery and Claude L. Spencer were elected to membership on application, and Dr. Wayne T. Robinson on transfer from Bedford County, Tennessee.

An invitation from the society was extended to the Southern Medical Association to meet in Dallas in 1925. The society endorsed the campaign for the completion of the Dallas Sanitarium. It was stated that members of the Dallas County Medical Society have subscribed about $75,000 for the building of this institution.

Grayson County Medical Society met at Whitesboro, September 2, 1924, with the following members in attendance: Drs. D. K. Jamison, A. W. Acheson, J. W. Bounds, M. C. Murphy, J. A. Rutledge, J. H. Veazey, S. D. Moore, G. W. Greer, C. L. King, A. M. McElhannan, T. W. Brown, G. E. Henschen, D. C. Enloe, C. D. Price, Geo. Dimmitt and J. M. Weems.

The following members of the Cooke County Medical Society were present as guests, by special invitation: Drs. S. W. Kuser, C. R. Johnson, E. O. Clement, E. C. Mead and C. B. Thayer, all of Gainesville.

Dr. S. D. Moore of Van Alstyne, read a very interesting paper from an article appearing in the *Therapeutic Gazette*, entitled "Carbohydrate Tolerance in Relation to Hypertension in Nephritis, Pellagra, Heart Conditions, Rheumatism," etc.

Dr. Moore says that practically all high blood-pressures can be lowered by a rigid diet and the administration of dilute nitric acid, thirty drops, three times daily, before meals, and ten grains of ox-gall, three times daily, after meals. He cited a number of cases covering several years, that had come under his personal care, all of which had been benefited or cured by a starch and sugar free diet and the above medication.

After the scientific program, the entire assembly repaired to the home of Dr. King, where Mrs. King assisted by Mesdames C. D. Price and G. W. Greer, had prepared a splendid banquet.

Dr. Acheson, in behalf of Grayson County Medical Society, and Dr. Kuser, in behalf of Cooke County Medical Society, thanked Dr. King for his lavish entertainment. Dr. King's response left no doubt that real Southern hospitality still exists.

Tarrant County Medical Society met September 2. Dr. Jack E. Daly read a paper on "Periarterial Sympathectomy; Indications, Technique and Results." He stated that periarterial sympathectomy is the surgical removal of the sympathetic plexuses which are to be found in the adventitia and sheaths of arteries. The indications for the operation are uncertain and the clinical results have not been verified experimentally. The operation is said to be particularly useful in various vasomotor and trophic disturbances such as Reynaud's disease, trophic ulcers, trophedemas, causalgias, hypertonic muscular contractures and to a less degree in thrombo-angeitis obliterans. In femoral sympathectomy, the operation is done under local anesthesia, preferably over the junction of the upper and middle thirds of the thighs, the incision exposing the femoral vessels. With fine forceps the sheath of the artery is picked up and the sympathetic plexuses completely excised. This produces a marked contraction of the artery which in 12 to 24 hours is followed by improvement in the color of the extremity, feeling of heat, and frequently, a rise in blood-pressure. The incision is closed without drainage. The satisfactory and almost spectacular results obtained in otherwise apparently hopeless cases, would justify a more general employment of this operation.

The paper was discussed by Drs. Frank Sanders and C. F. Clayton.

Dr. Chas. H. McCollum read a paper written by Dr. T. S. Lorton entitled, "Practical Applications of a Kidney Function Test." The new test was applied to post-cystotomy cases, when the collection of urine is quite difficult, in the following manner: For effecting continuous drainage from the suprapubic wound, a rubber tube is attached to the Marion tube catheter, and intermittent suction is established by means of a modified Bremerman apparatus, which causes a column of water to flow down a tube at intervals through a Y, causing a suction on the tube in the bladder. This water, together with the urine sucked out, is collected in a receptacle on the floor. The phthalein test is given in the usual manner without disturbing the apparatus. Sodium hydroxide is added to the receptacle on the floor and the time of appearance is noted. Water is added to the fluid in the receptacle to make 1000 c.c. and readings are made by means of a colorimeter. By this means readings may be made as desired and a definite prognosis made as to the condition of kidney function. By collection of the phthalein output, the surgeon is warned of impending danger from two to four days before the actual crisis, and then blood chemistry may be indicated as a check. Since the author of the paper was absent, there was no discussion.

Dr. Zack Bobo, Jr., was elected to membership.

The Panhandle District Medical Society met in Lubbock September 16-17, with a large attendance. President Archie Cole of Pampa opened the meeting and the Reverend Jennings of Lubbock, delivered the invocation. Senator W. H. Bledsoe of Lubbock, welcomed the society to the city most felicitously.

The following scientific program was rendered during the two days of the session: "Tote Fair," Dr. J. F. Owens, Plainview; "The Management of Diarrheas in Children," Dr. J. P. Lattimore, Lubbock; "The Treatment of Some Common Skin Diseases" (illustrated), Dr. J. B. Shelmire, Jr., Dallas; "Problems of the Medical Profession," Dr. Holman Taylor, Fort Worth; "A Few Remarks on the Post-Natal Care in Normal Obstetrics," Dr. D. D. Cross, Wellington; "Uterine Hemorrhage," Dr. D. C. Hyder, Memphis; "Factors of Safety and Conservatism in

Gynecological Surgery," Dr. E. H. Morris, Canadian; "Cystitis in Women," Dr. Fred H. Cariker, Childress; "Clinical Diagnosis of Internal Diseases as Applied to Gynecology and Obstetrics," Dr. W. Forrest Dutton, Amarillo; "Diagnosis of the Three Types of Goitre," (illustrated), Dr. E. O. Rushing, Dallas; "T. B. of the Kidney," Dr. Raworth Williams, Dallas

Resolutions were passed, deploring the death of Dr. C. F. Wilson of Memphis, president of the society, who died in office.

An amendment to the by-laws was adopted, changing the time of meetings to the second Tuesday and Wednesday in April and October of each year.

A public health meeting was sponsored by the society on Tuesday night, Drs. A. C. Scott of Temple and Chas. H. Harris of Fort Worth, discussing the many problems of public health in which the laity might be expected to be interested. The meeting was well attended and the addresses well received.

A six o'clock dinner was served by the Lubbock physicians, which was attended by both the society and the Woman's Auxiliary. Following the dinner, Dr. W. C. Dickey of Memphis, formerly Councilor of the District, who has retired from practice and is in the banking business now, presented most forcefully the layman's attitude towards the medical profession, and how regard of the layman for the doctor might be raised. He stated that the principal difficulty at the present time is the propaganda of the cults and the quacks, very ingeniously presented through the public press, coupled with the fact that many doctors do not render due returns on their employment. He gave it as his opinion that the medical profession will come into its own with a vengeance when it has on the average fitted itself to render the limit of service and has properly called attention to the inadequacy of fake practices in medicine. He dwelt upon his pride in his own profession and the practitioners of the Panhandle, and felt that there was very little just criticism, but the little that arises serves to cast a shadow of doubt over the entire situation.

Dr. Holman Taylor of Fort Worth, Secretary of the State Medical Association, discussed the problem of the Woman's Auxiliary, pointing out that the real purpose of the auxiliary is to help the medical society to which it is an auxiliary, in carrying out its purposes. This fact is often lost sight of because of the general impression among its members that it is a woman's club and the work of the woman's club is more or less standardized, although bearing on a variety of problems. To be a participant in the Federation of Woman's Clubs of any community is the smallest part of the function of any auxiliary to a medical society. To help teach the gospel of preventive medicine, and scientific curative medicine to the lay public, is its highest purpose. There should be liaison between the organization and its auxiliary, in order that they might coördinate their efforts. This important point is generally overlooked.

The Woman's Auxiliary held its sessions coincident with those of the District Society, and enjoyed an elaborate program of entertainment in the meanwhile, much of which was shared with the doctors.

The section officers of the society will hold over until after the annual session in Amarillo, the second Tuesday and Wednesday in April. They are as follows: *Section on Medicine*: Dr. J. F. Owens, Plainview, Chairman; Dr. H. H. Latson, Amarillo, Secretary. *Section on Gynecology and Obstetrics:* Dr. D. D. Cross, Wellington, Chairman; Dr. L. V. Dawson, Canadian, Secretary. *Section on Surgery:* Dr. W. H. Flamm, Amarillo, Chairman; Dr. W. N. Wardlaw, Childress, Secretary.

CHANGES OF ADDRESS.

Dr. W. J. Johnson, from Tyler to Austin.
Dr. W. W. Hammons, from Plantersville to Houston.
Dr. W. E. Payne, from Cisco to Slaton.
Dr. G. Burton Fain, from Blackwell to Sweetwater,
Dr. Jos. E. Johnson, from Houston to Fairfield.
Dr. Jas. A. McKay, from Madisonville to Denton.
Dr. David White, from Hamlin to Springdale, Ark.
Dr. D. E. Winstead, from Graham to Shreveport, La.
Dr. G. S. Ramsay, from Sugarland to Quentin, Miss.
Dr. J. E. Adams, from Longview to Kilgore.
Dr. Miles J. Duncan, from Dallas to San Francisco, Calif.
Dr. H. A. Winters, from Port Arthur to Houston.
Dr. L. W. Crossley, from Ysleta to San Antonio.
Dr. J. J. Gill, from Dodd City to Eros, La.
Dr. E. O. Deal, from Mertzon to Abilene.
Dr. P. V. Ledbetter, from Houston to Kerrville.

DEATHS

Dr. Leonidas B. Sowell died at his home in Forney, Texas, September 14, 1924, of angina pectoris, after an illness of only a few hours. He was born at Scyene, Dallas County, Texas, May 9, 1872. His father, Dr. C. B. Sowell, was one of the pioneer physicians of North Texas, coming to this State

DR. LEONIDAS B. SOWELL.

from Mississippi directly after graduation from Tulane University, in 1871. Dr. Sowell was educated in the public schools of Forney and at Trinity University, obtaining his medical education from the University of Louisville, Ky., where he received the

degree of M. D., in 1893. He returned to Forney and began to practice medicine, continuing in practice there until the time of his sudden death. Dr. Sowell married Miss Pauline Rugel, daughter of a well known banker of Mesquite, Dallas County, Texas.

Dr. Sowell was an active member of his county medical society, which he at one time served as president. He served as county health officer of Kaufman County from 1914 to 1918, and had been surgeon for the Texas and Pacific Railroad, at Forney, for the past fifteen years. He had been an elder in the Presbyterian Church since he was eighteen years of age. He was also an active member of the Masonic Lodge, having served as Worshipful Master, and as representative to the Grand Lodge a number of times.

Dr. Sowell is survived by his wife and five children, three of whom are graduates of Trinity University. His oldest son, Rugel, is now a sophomore in the Medical Department of Tulane University.

Dr. Sowell was an honored citizen of Forney and had the esteem, confidence and respect of all who knew him. He stood for the best of everything in life and took an active interest in the upbuilding and betterment of his community. In his passing Forney has lost one of its most valued citizens.

Dr. Wm. Francis McManus died at his home in San Antonio, September 15, 1924, following an attack of angina pectoris.

Dr. McManus was born September 21, 1866, at Ellenburg, New York. He moved to Canada with

DR. WM. FRANCIS McMANUS.

his family and later to Minnesota, where he received his elementary education. He graduated from the Crookston, Minnesota, high school and received his degree in medicine from the Rush Medical College, in 1902. He practiced in Ellendale, North Dakota, and then in Grand Forks, moving to San Antonio in 1911, where he practiced until the time of his death, with the exception of the period which he served in the army during the World War. Both Dr. McManus and his son, Capt. Edwin H. McManus, saw military service during this war, the former serving one year at Camp Logan Base Hospital and a year in France as Commanding Officer of Base Hospital No. 120. He was honorably discharged with the rank of Major, at Ft. Sam Houston, Texas, in June, 1919. He was an active member in the American Legion, being vice-commander of the Alamo Chapter of that organization, at the time of his death. He had been an active member of the Bexar County Medical Society for many years. He was one of the directors of the first San Antonio Playground Association and took great interest in civic affairs as well as in scientific matters.

Dr. McManus was married to Miss Eleanor Harrington of Superior, Wisconsin, on November 10, 1896, from which union three children were born, Edwin Harrington, Eileen and Kathleen. He is survived by his widow, his two daughters and three brothers, George J. of Dallas, Edwin of Superior, Wisconsin, and Albert E. of Los Angeles, California.

Dr. Spencer C. Relyea of Dallas, died at his home, August 5, 1924, the anniversary of his seventieth birthday.

Dr. Relyea was born of French parents, in New York, in 1854. He received his degree in Medicine from the Louisville Medical College, in 1881, and began practicing the same year at Ladonia, Fannin County, Texas, where he continued to practice for forty-one years. He moved to Dallas two years ago. He had been, until the last year, a member of Fannin County Medical Society for many years. He is survived by one son and two daughters.

BOOK NOTES

A Text-Book of Anatomy and Physiology for Schools of Nursing, Normal Schools and Colleges. By Jesse Feiring Williams, M. D., Professor of Physical Education, Teachers' College, Columbia University. 12 mo., 523 pages, 19 Chapters, 369 Illustrations, 25 of which are in colors. Cloth, $3.00 net. W. B. Saunders Company, Philadelphia and London, 1923.

In his preface, Dr. Williams, who is a well known writer of text-books especially designed for the use of school teachers and nurses, states that a great many books that have been written with this same purpose in view, are either inaccurate, or because of abbreviation lack unity and logical sequence. It is a well known fact that it is harder to teach the truth to an individual who has been previously misinformed. This book takes up in a very logical manner a description first of simple structures such as the single cell and then describes the building of more complex structures from such cells, and the differentiation of these cells to form those with a more highly specialized function. A brief study of embryology is given in order to enable the student to understand better how certain anatomical structures are formed and the interrelation of the body structures. The illustrations are, for the most part, taken from standard anatomies and physiologies, and are therefore both accurate and instructive. So many anatomies written for schools are illustrated with drawings that are not anatomically correct. An accurate drawing enables one to visualize the structures studied much better than the printed text, no matter how well the latter may be written. Next to actual dissection of the body, accurate drawings and charts afford the best means of understanding anatomical structures. Dr. Williams has stated in his preface that he has

sought "to awaken in the student an interest in the study that shall be more compelling than that of the required course." It is believed that the student will find that Dr. Williams has succeeded in this purpose.

"Strange Incidents." By John H. Hunter, M. D. A small paper-backed volume containing selected incidents from the life of a doctor who has practiced medicine from the Hudson River to the Amazon. Price, $1.00. Those desiring a copy of this book should address Dr. John H. Hunter, at La Feria, Texas.

Aside from being an American patriot, Dr. Hunter has also been a Mexican revolutionist. Personally, we have enjoyed this little book, not only because it is produced by home talent, but because of the very original method the author has of describing incidents that are both amusing and instructive. A sidelight is given on the real conditions that exist in Mexico, especially in the more rural sections. The only quarrel that we have with the book is such faults as might be expected when the work is done by a small press, where doubtless the proof-reader is a good fisherman and the fish bite well. The book review editor got a dollar's worth of laugh out of a single sentence in this book, and hence the book is most heartily recommended to our readers, with the assurance that they can find at least that much amusement between the red paper covers of the little volume. We wish it *bon voyage*, and hope that the author may be encouraged to further display his talent.

A Manual of Proctology. By T. Crittenden Hill, Ph. B., M. D., F. R. C. S., Instructor in Proctology, Harvard Graduate School of Medicine; Surgeon to Rectal Department, Boston Dispensary; Ex-President American Proctologic Society. 280 pages, 15 chapters and 84 engravings. 12 mo.; Cloth. Price, $3.25. Lea & Febiger, Philadelphia and New York, 1923.

This brief work on Proctology describes the usual methods of examination of the rectum and diagnosis of rectal diseases. The various diseases of the rectum are then taken up and described, together with the appropriate treatment for each of them. Dr. Hill is a recognized authority in his chosen field, and his advice in this little volume may well be heeded by those who undertake this work. The illustrations are very good and readily understandable. It is unfortunate that on page 262, Figure 80 was printed upside down. This is about the only serious typographical error that was noted in a hasty review of the book.

We feel that this is a timely volume in a very important field of surgery, and one that is sadly neglected in most medical colleges.

Rhus Dermatitis (Poison Ivy), Its Pathology and Chemotherapy. By James B. McNair, University of Chicago, Chicago, Ill. 300 pages, 16 chapters, an appendix, 15 illustrations and 3 plates. Octavo, Cloth. Price, $4.00. University of Chicago Press, Chicago, Ill.

This unusual book has received very favorable notice from a number of medical and scientific journals. The principal members of this group of poisonous plants, namely, Rhus Toxicodendron, Rhus Radicans and Rhus Diversiloba, are described in detail. The first chapter discusses the history and distribution of these plants. The second chapter is devoted to the morphology and anatomy of Rhus Diversiloba. Next is taken up the origin and occurrence of the poison, its character and mode of transmission. The chemistry of the poisonous principle of these plants is described in detail, giving not only the opinion of the author but the opinion of many other prominent investigators. After this is taken up the pathology of Rhus Dermatitis and the differential diagnosis of this disease from other dermatoses. Immunity is discussed, with the conclusion that although natural immunity toward the irritant principle does exist in some individuals, it is "usually relative and seldom absolute." There appears to be no racial immunity but the degree of immunity depends, as in many bacterial diseases, upon the physical condition of the one exposed.

Next is detailed several methods of treatment that appear rational to the author, after a brief discussion of the multitudinous (and usually ineffectual) remedies that have been suggested from time to time, by various authors and practitioners. The appendix contains abstracts of typical cases of Rhus Dermatitis, taken from the medical literature. The book concludes with a very exhaustive bibliography which is divided into botanical references, chemical references, pathological references, and remedies. The subject of this book is a very common form of dermatitis, and one which is frequently met with throughout the United States. It is one, therefore, with which the physician should be familiar and it is believed that nowhere can such a comprehensive treatise on this special subject be found as in this volume.

A Text-Book of Surgical Anatomy. By Wm. Francis Campbell, A. B., M. D., F. A. C. S., Brooklyn-New York, Surgeon-in-Chief, Trinity Hospital; Sometime Professor of Anatomy and Professor of Surgery, Long Island College Hospital; Consulting Surgeon, Methodist Episcopal, East New York and Brownsville, Coney Island, Swedish, Jamaica and Zion Hospitals. Third Edition, Revised. Octavo, 682 pages, 31 Chapters, 325 Original Illustrations. Cloth. W. B. Saunders Company, Philadelphia and London.

This splendid work on surgical anatomy is so well known as to need no introduction to our readers. The various regions of the body are described from the surgical viewpoint, giving accurately all the principal anatomical relationships. The accurate illustrations are a great aid to the reader in visualizing the structures and regions described. Many original observations are included in this text. Of especial value is the author's contribution to our knowledge of the anatomy of the hand. The object of any anatomical study is the laying of a broad foundation for the surgeon to build upon. All great surgeons have first been great anatomists. Both the surgeon and the student of medicine will find this volume a treasure-house of applied anatomy.

Dreads and Besetting Fears, Including States of Anxiety, Their Causes and Cure. By Tom A. Williams, M. B., C. M., Membre Correspondant Etranger de La Societe de Neurolgie de Paris. Membro Correspondente Academia Nacional de Medicina de Rio de Janeiro, Etc. Neurologist to Freedman's Hospital. 218 pages and 14 chapters. 12mo., Cloth. Price, $1.75. Little, Brown and Company, Boston, 1923.

Dr. Williams is well known as a neurologist and psychiatrist. What he has to say concerning fear, its origin and its influence in the life of the individual, is interesting reading both for the layman and the practitioner. In these days when the subject of psychology, psycho-analysis and psychiatry have become more or less familiar to the general public through opinions expressed in the daily press and in current magazines, much unscientific piffle has been printed and many opinions have been

expressed concerning abstruse and difficult subjects by those whose education and training would not entitle them to be regarded as authorities, to say the least. It is a well known fact that most physicians do not pay enough attention to the psychology of the cases that come under their notice, and the failure of a doctor to cure his patient has very often resulted directly from his lack of appreciation of the mental attitude of the one he is attempting to treat. The chapters of this book deal with the following subjects: Chapter I, Early Origin of Dreads; Chapter II, Bashfulness and Kindred States; Chapter III, College Breakdowns; Chapter IV, Fear and Stammering; Chapter V, Anxiety States; Chapter VI, Occupational Phobias; Chapter VII, Fear of Crowds, Open Spaces, Etc.; Chapter VIII, Other Common Phobias; Chapter IX, Physical Conditions and Fear; Chapter X, Heredity and Fear; Chaptèr XI, Fear by Induction; Chapter XII, The Fascination of Fear; Chapter XIII, The Utilization and Management of Fear; Chapter XIV, The Dispelling of Fear.

This book is recommended to our readers as both entertaining and instructive.

Diseases of the Skin. By Frank Crozer Knowles, M. D., Professor of Dermatology, Jefferson Medical College; Lieutenant-Colonel Medical Reserve Corps, U. S. A.; Dermatologist to the Philadelphia General, the Presbyterian, the Children's and the Babies' Hospitals; Chief of Clinic Dermatological Department, Pennsylvania Hospital; Consulting Dermatologist to the Church Home for Children, the Baptist Orphanage, the Southern Home for Destitute Children, the Eastern State Penitentiary and the Burd School; Member of the American Dermatological Association; Fellow of the College of Physicians, Etc. Second Edition, thoroughly revised. 229 illustrations and 14 plates; 596 pages. Octavo, Cloth. Price, $6.50. Lea and Febiger, Philadelphia and New York.

This comprehensive work on Dermatology has introduced an innovation in not being divided into chapters, or at least the chapters are not designated as such and numbered. The first part of the book is taken up with a description of the embryology, anatomy and physiology of the skin and its appendages. Next is discussed the symptomatology, etiology, pathology and diagnosis of skin diseases in general, with a classification of types of lesions, regional distribution of skin diseases and special methods of diagnosis. This is followed by a general discussion of the methods of treatment employed in skin diseases. The bulk of the volume is taken up with a description of the various skin diseases which are divided into thirteen groups or classes, as follows: Class 1, Hyperemiae-Hyperemias; Class 2, Exudations-Inflammations; Class 3, Hemorrhages; Class 4, Hypertrophies; Class 5, Anomalies of Pigmentation; Class 6, Atrophies; Class 7, New Growths; Class 8, Neuroses; Class 9, Diseases of the Skin Caused by Vegetable Organisms; Class 10, Animal Parasitic Diseases; Class 11, Diseases of the Appendages; Class 12, Diseases of the Mucous Membranes; Class 13, Acute Eruptive Fevers.

The description of the various skin diseases is brief but really descriptive and thoroughly understandable. It is not believed that anything has been lost through brevity, as an outstanding fault of many works on dermatology has been their verbosity. A great deal depends upon the clearness of the illustrations in any work on skin diseases. The illustrations in this book are excellent, and from them, as well as from the printed text, one can gain a very good idea of the character and appearance of the disease which they illustrate. The author states in his preface that the endeavor has been made to make "this volume of practical use to the student and general practitioner," in which purpose we believe he has succeeded admirably.

An Essay on the Physiology of Mind. An Interpretation Based on Biological, Morphological, Physical and Chemical Considerations. By Francis X. Dercum, A. M., M. D., Ph. D., Member of the American Philosophical Society; Fellow of the College of Physicians of Philadelphia; Member of the Academy of Natural Sciences of Philadelphia; Professor of Nervous and Mental Diseases in Jefferson Medical College, etc. 12 mo., 150 pages. Cloth, $1.75 net. W. B. Saunders Co., Philadelphia and London.

This essay is written in the author's usual clear style. The book necessarily deals with abstractions and the reader must show great concentration to follow the thought all the way through, as ideas that are new to the average reader are presented and each paragraph hinges closely on its predecessor, very much like a geometrical problem. The essay begins with a consideration of the nervous mechanism of protozoa and metazoa, studying the changes that take place as structures of the ascending organisms become more differentiated. Then the nervous structure of the higher forms of animal life is taken up, and finally that of the vertebrates. From comparative anatomy and physiology, certain deductions are made concerning the physiology of the human mind. In common with several other great investigators, Dr. Dercum believes that the neurones possess an amoeboid movement. It has long been recognized that certain body cells possess such movement, most notably the polynuclear leucocytes. The power of attraction by which certain structures are drawn to certain other structures is known as "chemotaxis," while "the change in position is obviously expressive of a physical reaction to a stimulus, and the phenomenon has received the name of "neurobiotaxis." Careful study has shown that there is a definite element of time for the transmission of a nerve impulse. This lapse of time is explained as due to inertia or resistance at the beginning of each neurone, *i. e.*, at its dendrite. The neurones are accustomed to move in a certain direction under the influence of neurobiotaxis, and away from certain repelling influences, according to the same principle. This would seem to explain some associated nerve actions. It also serves to explain, in pathological conditions, the association in certain diseases of certain impulses and ideas. In disease, the synapses suffer a functional break and the impulse is no longer passed from cell to cell in the customary manner. On the other hand, certain abnormal cell relations may be established, bringing about a change in the reflexes and an altered and abnormal ideation. Certain cells may become fixed, and it is this fixation which probably accounts for the systematization of delusive ideas as seen in dementia praecox. The action of destructive poisons, either mineral or those introduced by parasites, would obviously produce even greater changes in these cell relations. All who are interested in the study of thought processes and of the human mind, will be interested in this scholarly study of the physiology of the mind.

Are You Going to the Southern Medical Association?

Texas State Journal of Medicine

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Red Cross Calls the Roll.—When disaster strikes, the National Red Cross acts promptly and efficiently to administer relief to those who suffer. It is a practical application of the ideals of mercy. From November 11th through November 27th, the Red Cross annual, nation-wide roll call will be held. At this time the membership of this splendid organization will be renewed for 1925. Physicians and their families are invited to participate in the service of the Red Cross by joining through local chapters or branches. When disaster comes we cannot all serve at the front. None of us could, as for that, if preparations for service were not made in advance. Perhaps few of us can afford to contribute large amounts to the Red Cross, or to any other welfare organization, as for that, but any of us can afford the one dollar membership fee, and surely this small amount is not too much to ask of us. Indeed, we might do our full share and buy a few memberships for those less fortunate than we are in matters of finance. We perhaps think there are no such animals, but a moment's reflection will undeceive us. There are; we see them daily in our practice.

Perhaps we have an idea that the public health efforts of the Red Cross have been rendered in time of peace quite contrary to the ethics of the medical profession. We recall that the House of Delegates of the American Medical Association on two separate occasions criticized the Red Cross in this particular. The criticisms, we understand, have been very largely met. Recently the Director of the American National Red Cross Association had the following to say:

"In spite of the fact that both workers, public health nurses and practicing physicians, are seeking exactly the same goal by parallel roads, there exists in some places a lack of sympathy between the two groups which I am convinced is based on misunderstanding. Doctors who are not thoroughly familiar with the ways of public health nurses may fear that these nurses are in the habit of diagnosing, prescribing drugs, giving treatments and of committing various other ethical transgressions. The principles observed by every reputable public health nursing agency may be stated as follows:

"1. Public health nurses do not diagnose, do not prescribe drugs and do not give treatment without a doctor's orders.

"2. Public health nurses do not give nursing care after the first visit without a doctor's orders.

"3. Public health nurses do not recommend individual doctors, but advise patients to go to their family physician.

"4. Public health nurses do not recommend that patients change doctors or seek hospital care when they have a family physician.

"It is probable that an occasional public health nurse who has not had the advantage of adequate preparation for her work, and who is not thoroughly trained in these principles, oversteps her prerogatives. No doubt, too, there are nurses now and then

who wilfully disregard these principles. These, however, are few in number and do not represent the profession at large. The whole body of public health nurses should no more be judged by these miscreants than should the profession of law by the shyster lawyers or the profession of medicine by its less reputable members."

Aside from its service to the Army and Navy in time of war, the Red Cross is chartered "to carry on a system of national and international relief in times of peace and to apply the same in mitigating the suffering caused by pestilence, famine, fire and other great national calamities, and to devise and carry on measures for preventing the same." Acting under this clause of its charter, the Red Cross has framed a peacetime program, which requires, first of all, assistance to the disabled ex-service man, after which local chapters function in accordance with the needs of local communities, but with the distinct understanding that there shall be no duplication of work of existing agencies. It is made clear that "Red Cross peace-time service is community service, chosen, supported and directed locally." In an effort to continue the organization on a basis from which it could rapidly expand in time of emergency, public health nursing has become a distinct feature of the Red Cross. If this service has overstepped the bounds of propriety and infringed upon the prerogatives and privileges of other and necessary agencies, it is a matter for local correction, very largely. The medical profession can exert its influence in controlling conditions complained of if it will take an interest in the work. Other agencies are at work in an effort to convince higher authorities that socialized medicine is not good for the public, and that too much of a good thing is sometimes more than enough. We feel that our obligation to the Red Cross has not been curtailed in the least, and that until further notice, we should give it our unqualified support.

The International Health Board (of the Rockefeller Foundation) is the biggest thing of its kind in the world. It considers the welfare of the public from the broadest possible viewpoint. It has it within its power to undermine the personal service of the medical profession or underwrite it, either one. It has chosen the latter course, and like the Red Cross, refuses to duplicate effort. Unlike the Red Cross, however, it is dependent upon one man alone for aid and support—not upon the millions of our citizens upon whom the latter is now calling for support. The two organizations do not operate in the same direction, although their efforts are to the same end, namely, that the health of the public may be protected and its welfare from a health standpoint safeguarded. The following pronouncement by one of the managers of the International Health Board, is of interest in this connection:

"The International Health Board looks upon public health as essentially a function of government, a recognized field for voluntary effort in promoting public health. Official organizations, as a rule, must limit their programs to those activities whose worth is thoroughly established in the public mind and for which appropriations are guaranteed; it is difficult to obtain official funds for pioneer work so long as there is any question as to the value of the new project. Voluntary agencies are not bound by rigid statutes or annual appropriations for limited activities and hence have a flexibility which permits them to work productively in unexplored fields and to be of assistance in emergencies.

"Here, therefore, is the province of the voluntary agency: it can and should keep ahead of official health practice in each locality, advancing steadily to newer fields as each of its demonstrations proves successful and the constituted authorities are ready to take full responsibility for the activity. The International Health Board has been conducted on such principles, and it does not feel that any given demonstration has been successful unless its assistance ceases to be needed within a reasonable time. Any project which is not absorbed into the official health service is obviously unsuited to the time or the place."

When the International Health Board has served its purpose and the cause, method of prevention and cure of all diseases have been discovered, it will presumably gracefully retire from the field. Red Cross cannot do that until our pacifist friends have abolished the possibility of war. We, therefore, repeat our observation that the medical profession should assist in every way possible in furthering the interests of the Red Cross and providing it at the same time with a satisfactory membership and finances adequate to its needs.

Cancer Publicity.—It has been our custom to discuss the problem of cancer with our members once each year, usually in the November JOURNAL. Formerly, "Cancer Week" usually fell in November, and later on that

month was decided on for "Cancer Month." Now, apparently, it is "Cancer Year," which would seem to call for repeated reference to the subject and not for a condensation of thought and discussion at any particular time. Our Committee on Cancer has been instructed to push the problem of cancer throughout the year, and the JOURNAL has decided, as a matter of policy, to print each month one or more papers on the subject. It is hoped in this manner to make cancer thought a sort of habit with doctors, and whatever else may be said, the foundation of cancer effort is upon the medical profession. It is up to the doctor to keep continuously on the lookout for early cancers and precancerous conditions, and be at all times prepared to advise wisely as to treatment.

It is hardly necessary to say a great deal at this time about the prevalence of cancer, the means of diagnosis or methods of treatment. From the standpoint of statistics, the disease is on the increase. While we are inclined to believe that the quickened conscience of the medical profession and increased knowledge of early cancer symptoms, not to mention the reaction of the public to cancer publicity, is responsible for what appears to be an increase in the incidence of the disease, which is rather an increase in the number of cases discovered, and in the number of cases identified as cancer and separated from coincident diseases, it may easily be that living conditions or the physical development of the human race, or some other cause is conducing to increased prevalence of the malady.

However that may be, the fact remains that we do not understand all we know about cancer, either as to its cause or cure, and we must proceed accordingly. We do know enough to say positively and definitely that if a cancer lesion is discovered early enough the disease can be cured either by the use of surgery or radiation, or the two combined, and that so far no hope is held out for a cure by medication, either local or internal. No matter how enthusiastic proponents of methods of treatment or ideas as to cause and prevention may be, the safe attitude is to depend on nothing that we do not know about, pending proof. In our opinion the physician who would advise his patients to lose time in taking a treatment which has not been definitely proven and which does not include either surgery or radiation, or both, is taking unjustifiable chances and imposing upon the confidence of his patients. Indeed, the greatest harm done by the cancer quack is the loss of time. The use of pastes and the like, of course, serve to assist in the spread of the disease, but faith cures, manipulations and internal medications do their damage in cooperation with old Father Time. We should realize that and advise accordingly.

So far as the public is concerned, it is sufficient to urge the importance of early investigation of any suspicious conditions, and the serious results of delay. How best to do this is the big problem, of course. If we confine our efforts to the limitations of our practice, a large proportion of the public will not be reached, because a large proportion of the public are not sick, and perhaps do not get sick, and do not consult reputable physicians when they do get sick. It is quite probable that the Council on Legislation and Public Instruction will materially help our Cancer Committee in its publicity efforts, if, indeed, it does not make cancer its principal subject for publicity during the next year. Even so, the same difficulty heretofore met with in all publicity efforts will have to be overcome, namely, the difficulty in securing audiences. It is here that our county societies can best serve the cause. They can seek ready-made audiences, or provide ways and means for securing audiences. Dr. I. L. McGlasson of San Antonio, is chairman of the Cancer Committee, and will welcome coöperation of this sort. It will not do to discuss with the lay public the horror of cancer or to excite them in regard to the possibilities of harm in that connection, not to mention other precautionary measures to be considered. Hence the desirability, if not the necessity, of working in conjunction and under the direction of Dr. McGlasson and his committee.

It seems sufficient to urge upon county societies that they do two things, namely, conduct as many cancer meetings and clinics as possible, for the benefit of their members, and endeavor to provide opportunities to speak to the lay public on the subject, always in conjunction with the Cancer Committee of the State Medical Association.

Committee on Care and Treatment of the Insane Revived.—A General Session of the State Medical Association, at San Antonio, May 1, unanimously adopted the following resolutions, which were introduced by Drs. O. L. Norsworthy and Jas. Greenwood of Houston, W. L. Allison of Fort Worth and J. A. McIntosh of San Antonio:

"*Whereas*, we have just listened to an expose of the deplorable conditions in the handling of our insane, epileptics, drug habitues and inebriates; and

"*Whereas*, many efforts have been made in the past by newspapers, county judges and medical societies, without bringing about the needed change; and

"*Whereas*, this is purely a medical matter; therefore, be it

"*Resolved*, that the State Medical Association of Texas, now assembled in general session, place itself on record as urging the following remedies:

"(1) That the laws of this State be changed so that a humiliating public trial of the insane will be abolished.

"(2) That adequate room be provided in our institutions, so that our insane may not be held in jail.

"(3) That one or more psychopathic hospitals be established where such patients may voluntarily seek observation and treatment, and where acute cases and questionable criminal cases, can be immediately sent for observation and study.

"(4) That a separate institution be established for the care and treatment of the criminal insane.

"(5) That a separate department be provided for the care and treatment of the alcoholic and narcotic cases, and proper laws be placed on our statute books governing the commitment of these cases.

"(6) That a separate department be provided at the Epileptic Colony for the care of the insane epileptics.

"(7) That a commission be created, composed of individuals properly qualified, the majority of whom shall be physicians who have had at least three years experience in the treatment of the insane in the State institutions, to have control of all institutions handling the insane, epileptics and drug habitues, said commission to replace the present Board of Control in this particular.

"(8) That a careful study be made of the question of sterilizing certain classes of the insane, feeble minded and unfit, and of their marriage.

"(9) That the President of this Association be authorized to appoint a committee of seven, whose duty it shall be to study the above problems and take the necessary steps to carry out this program."

These resolutions followed three very excellent papers on the subject, all of which, incidentally, will be published in the JOURNAL in the near future. In compliance with the requirements of the resolutions quoted, President Dr. Bledsoe has appointed the following committee: Dr. W. L. Allison, Fort Worth, chairman; Drs. O. L. Norsworthy, Houston; J. J. Terrill, Dallas; T. L. Moody, San Antonio; John W. Burns, Cuero; J. N. White, Texarkana, and A. L. Lincecum, Dallas. It is understood that the committee has taken up its work in earnest and that prospects are good for beneficial legislation.

It will be recalled by our older members that for many years the State Medical Association maintained a standing committee having for its duties better provisions for the care and treatment of the insane, which has always been a sore spot on our civilization. A very comprehensive bill was proposed at one time, but we were frankly told that nothing so complicated would be considered by the Legislature; no one had time to work out the problem, and the money involved was too much to appropriate without careful consideration. Later on a law was enacted, providing for trial of these unfortunate dependents of the State by a jury of physicians rather than a jury of laymen, which did good so long as it lasted, but which was finally declared unconstitutional, presumably on the ground that a jury of physicians did not constitute a jury of "peers," as provided by the constitution of the State of Texas. We have not been able since that time to get anybody interested in the subject, and some time ago as gracefully as possible retired from this particular field of endeavor.

Recently, the Rotary Club in Houston, appointed a committee to study out this question and see what could be done. This action was inspired by the oft-repeated newspaper references to the disgraceful fact that numerous of our helpless and hopeless insane were incarcerated in jails, for the most part under very unsuitable and even hurtful surroundings. As it happened, our Section on State Medicine and Public Hygiene had taken up this problem as one of its principal endeavors, and the papers above referred to were provided for that section, and re-presented to a General Session. Those immediately concerned in the movement had no trouble in getting all the interested parties together, and the present endeavor to do something worth while is the result. It is to be hoped that success will attend our efforts this time, and that the State will decide, money or no money, that it will adopt the advanced scientific methods of handling the insane that have been so successful elsewhere.

We will not attempt to anticipate the decision of our committee, but it seems to us that the one thing needed, and the thing which will go furthest toward curing the situation, is the establishment of a modern, well-equipped and well-served psychopathic hospital. It is no doubt true that none of the hospitals for the insane are provided with the personnel and the equipment necessary to properly treat the large number of insane under confinement. An overworked staff is in each instance doubtless doing its best, and perhaps with some success, but treatment following a trial in court, (a disgraceful procedure, no matter how humanely the authorities attempt to act) and subsequent consignment to a "lunatic asylum," more often than

otherwise tips the scales in the direction of incurability. Leaving out of consideration humanity's sake, a psychopathic hospital, properly equipped and managed, will render ample returns on the money invested.

The newspapers of the State have recently been filled with communications, editorials and news items, bearing on the subject, some of them rather pertinent. They all agree that the jails should be emptied and better provisions made for treatment. The following paragraph from an editorial on the subject in the *Brownwood Bulletin,* is to the point:

"As was pointed out several weeks ago, the State should not only enlarge its asylum facilities, so that the jails may be emptied of the unfortunate insane, but should enlarge its staffs of doctors and nurses so that many of those committed to the asylum might have an opportunity to regain their normal mentality through the application of scientific methods of treatment and then be permitted to return to their homes and to useful occupations. Many who are adjudged insane could be cured if properly treated, but proper treatment is impossible so long as the medical staffs of the institutions are as limited as they are now."

This is a subject easy of comprehension by the intelligent layman, and if the medical profession can secure the results it has long pled for by doing so, it will be perfectly willing and pleased to play second fiddle, following the lead of such lay organizations as will assume leadership, within the bounds of reason, of course.

Continuation of the Publicity Campaign is for the present up to county societies. It will be recalled that the plan of the Council on Legislation and Public Instruction contemplated lectures by the best speakers that could be secured for the purpose, in selected centers throughout the State. Following this, county societies would organize for carrying the gospel into neighboring communities, either by using local talent or by securing outside speakers. In this endeavor, of course, the Councilor of the districts involved would be expected to participate in an advisory capacity, and the Council on Legislation and Public Instruction would help in every way possible. In some instances county societies have undertaken this work and have been notably successful, but for the most part, so far as we know, the project has gone by default.

It is not now too late to take up this work. Any county society that will interest itself in the matter will find the Council on Legislation and Public Instruction prompt to help in every way possible. Outside speakers can doubtless be secured, and a limited amount of newspaper publicity paid for. It is not necessary that a heartrending effort be made to secure an audience for the purpose. Ready-made audiences can be secured, among people who need to think about the matter in hand. We were recently in Clarendon, to use an example, on other business. The local profession secured a moving picture show and had us deliver one of the public health lectures, the whole show being free. The house was crowded and the opinion generally prevailed that the message was put over in good shape. That is merely one way of getting at the problem. There are many groups throughout the State ready and willing to hear discussions of this sort, when assured that the talks are not to be selfish propaganda or pure contention. Perhaps there are those among our people who desire to hear talks on special health subjects. Such might be arranged for. An address on any special subject can very comfortably make reference to the desirability and even necessity of placing the practice of medicine on a high, ethical plane, and urge that the beneficial facts of science useful in the practice of medicine, be religiously adhered to until new and more beneficial facts are disclosed and definitely proven.

County societies will look after these matters for the present, and the Council on Legislation and Public Instruction will plan new endeavors, such as are calculated to carry out the intentions of the State Association in ordering a campaign of publicity and education.

Reaction to Our Publicity Campaign.—We have been much interested in determining the reaction to our publicity and educational campaign, both in and outside of the medical profession. Almost without exception we find that doctors do not feel that the campaign has reached many people or that it has been for the present particularly productive of practical results, but that the effort is worth while and should be continued. It is usually agreed, following some discussion, that the mere fact that the medical profession has determined to in the course of time, if not immediately, see that the lay public is put in possession of the known, pertinent facts of medicine and the public health, for their own protection, has had a wonderful effect on the thinking public, and that definite good results will be attained. That is, of course, the ultimate objective of the campaign. If the profession can realize that much, and agree that the gain is worth what it cost, we are, indeed, progressing nicely. The next objective will be on a wider front, and may perhaps take a longer time to attain, but every step forward will represent a definite gain and the effect will be cumulative. There are those, of course, who believe that the whole procedure is unjustifiable from our standpoint, and that the cost, both in money and time, is excessive

and without excuse. It is this difference of opinion that makes the situation interesting, and the discussion will lead to the right decision.

From the lay public, opinion is so varied that it is impossible to enter into a comprehensive discussion of the subject. However, there are two main divisions of sentiment. On the one hand there are those who feel that the medical profession has gone out of its way to browbeat and abuse the unoffending cult practitioners, and on the other there are those who feel that we have been too backward in this respect; but whether holding the one view or the other, practically all agree that our best argument is a clear-cut, definite statement of the proven facts of scientific medicine, and what they have meant and still mean to the suffering public. Except for certain peculiar types, which are, after all, greatly in the minority, we have experienced no difficulty whatsoever in convincing the layman that it is to his advantage to require that those who are allowed to qualify for the practice of medicine in Texas, demonstrate a knowledge of the established facts of science upon which the practice of modern medicine is based, and that an educated, honorable medical profession is the most prized possession of civilization. It is this idea that we must advance persistently and intelligently, not so much for our own good as for the good of the public, but for our own good nevertheless.

One of our public health addresses was recently made before the Rotary Club in Brownsville. The time and the subject were divided between two speakers. We were told that the impression made on this intelligent body of men was good, and we are prone to believe it in the face of the minutes of the meeting, which we reproduce here, both as an amusing and keen piece of literature and as evidence of good will and appreciation:

"Harry Loew, pulling one of his usual 'low-brow' tricks, introduced to the club in turn, a long, slim man and a short, round one, saying they were eminent Doctors of Medicine, Holman Taylor of Fort Worth, and I. L. McGlasson of San Antonio, respectively.

"To look at them, you would have thought they were anything but Doctors, and they may be. Anyway, the short round one, who looked like a retired bartender, took the floor to speak to us on the prevention of disease. He recounted the digging of the Panama Canal by the Chief Surgeon of the Army and his staff of mosquito knockers and greasers of stagnant water. He said small-pox, through the agency of the muley cow and the drug manufacturers, had been practically eliminated, except in those parts of the world where the sales were heaviest.

"The round one also said that there were different kinds of Doctors, including those who cured with a course in pamphlet reading and the concentration of the mind on the desire to be cured. He said that no amount of fixing the mind on the desire to be cured, or the reading of high-priced pamphlets put out at a large profit by the Mother Church, would relieve the pain or draw the pus from the common sample of boil on the particular part of our anatomy upon which nature intended for us to take our rest and our childhood punishment. He said also, that there are Doctors who are ducks without the bill on the front of the face, but whose bills to their sucker patients would demonstrate without a doubt the wisdom of Barnum's statement. For, in fact, there are many suckers born ever minute and the wax figure shows longtailed and frocked Doctors who advertise in the papers to the youth of the Nation; and many other things go to show it. He said that a pimple on the cheek did not of necessity require a trip to Doctor Duck's office, and that a course in medicine, or never-ending treatment, was not a requisite to the returning of the boy's nerves and manhood to a normal condition.

"We enjoyed the round one's talk and even though he had used up all of the available time, we gladly stayed on while Slim took a shot at us.

"Slim spoke on the Science of Medicine.

"According to Slim, the science of medicine emerged from the same salt cell that all life is supposed to have come from, way back in the dawn of the Universe, that it followed the evolution of man on up the path of progress and down through the ages to the present time. Medicine was well established at the time the first tadpole or pollywog emerged from the primal salt seas and shed its gills. Old Doc Sawbones has been there, under one name or another, to torment and kill or to comfort and cure the ills of the evoluting life cell.

"Back in the stone age, according to Doc, the medical profession was highly perfected and well established in the lifeblood of the community. The Medicine man, or the Voo-doo man, had his fingers on the pulse of the nation, and on the purse-strings also. Of course, Doctors even in them days, of necessity, had to more or less temper the wind to the shorn lamb, and they sometimes did, *sharpening their knives* with much thought and care before applying them to the poor little lambs. When Old Man Stonehatchet fell and broke a leg, or doubled up with cramps from eating too heartily of animal fats, or gnawing and consuming more than a bushel of slightly decayed bones, in which rigor mortis had given away to the silent work of the enzymes and bacteria, and from which a stench arose that would not be permitted in any well regulated hide-house of the present time, old Doc Flintheart was invariably called to attend the patient, and the price for rattling a few dried gourds, the administering of a copious dose of sea water, if available, and the dancing of several highland flings to drive out the devil, brought a return for Doc in the way of a dozen cocoanuts, a hindquarter of a deer, a new bow and a dozen arrows, and in case old Stonehatchet had a beautiful little daughter Hatchet in his house, Doc added her in as *part payment on account*, and took the whole works home, because even in those days, the Medical Fraternity had to live, and did.

"Slim said he had attended college with Harry Loew, and had a high opinion of 'Low.' We didn't take kindly to the pun, as Doc was supposed to be talking on medicine and not on Harry Loew's faults, who, God knows, has many of them. One thing we noticed, however, while Harry referred to the speakers as 'Doctors,' yet neither of them accorded him that honor. We wonder why * * * Harry may not be all that a pillroller and backrubber should be, but he is a good presiding officer and we resented the insinuations on the part of these Doc's.

"The kissing of women, said Slim, was one of the most prolific methods of contracting syphilis, and should not be done, unless the girl or woman has a certificate from a regular physician that she is not so infected.

"Ye Gods, how times do change! Does Slim suppose that every girl in time to come will be forced to keep her certificate on file for the inspection of her sweetheart each night he has a date with her? Are we to wear an aspirator and take a bath in cresol every time we go near a strange young lady? Anyway, one member was heard to remark after the meeting that from now on he would never kiss another woman on the mouth, especially that kind of a girl. We don't know just what kind he referred to, but we rise to ask, 'Why kiss 'em at all?'

"Metabolism, due to the evolutionary propensity of the primary saltwater cell from which all life sprung, according to Doc, may be the cause of cancer. He said nature plants within each and every one of us the necessary means of recovering from sickness. He illustrated his talk with statements that were of much interest to us, especially the fact that 65 per cent of those ill recover in spite of the Doctors, 25 per cent get well with the assistance of the Doctors and 10 per cent die to spite the Doctors.

"From this statement the medical profession must be 65 per cent graft, and we can well understand now just why there are so many of those 'Duck' Doctors quacking around over the country.

"Both the round one and the slim one made good talks, that were well received by our members, many of whom expressed themselves as willing to pay ten dollars for the privilege of hearing such words of wisdom as they fell like pearls on the receptive ears of those present. We are sure the arousing of public sentiment for the prevention of disease will receive an added impulse from those who attended the meeting."

County Society Annual Meetings.—Preparations for their annual meetings should be made now by county societies, and steps taken to insure good attendance. Effort should also be made to cause members to realize the importance of the occasion. Upon the selection of officers for the next year much depends. If the president, or the secretary, or both, are selected for any other reason than that they are good executives, and interested in the work, there is apt to be failure. The same applies to other positions, of course, but quite likely in less degree, although at this particular time the position of delegate is of extreme importance. The House of Delegates next year must decide some important questions, most notably whether or not the publicity and educational campaign shall be continued, and what, if any, efforts the association shall make to protect the medical profession and the health of the public. The delegate who will not attend, or who habitually occupies extreme positions on any subject before him, may be on the one hand negatively and on the other actively harmful. In a representative government representatives are supposed to do some thinking for themselves and their constituents, and to carry out the views of their constituents where the thinking has already been done.

There should be no partisan politics in the selection of officers, but unquestionably the qualifications of those who would be honored by the opportunity to serve should be considered well in advance of their election. Any member of a medical society who will vote into office another member regardless of qualifications and for personal reasons, is false to his profession to the extent that harm may come from the practice. The fact that he has unwittingly offended does not help much. The purpose of our discussion at this time is to urge our readers to give the subject thoughtful consideration.

Another important matter is the payment of dues for the next calendar year. The recent increase in dues is going to place an additional burden on secretaries, and there is a lot of psychology in the situation. Prompt and willing payment of dues by any considerable number of members will go far to counter the influence of the objector. Whether the increase of dues is justified is not the question just now; it is a matter of playing the game, and playing it according to the rules. It is possible that there are those who cannot afford to pay the increased rate. We do not speak of these. They should, and doubtless will, as a rule, be taken care of. We have in mind the member who has not informed himself, or who is misinformed, and who balks purely in a spirit of resentment. He should consider that his recourse lies in an appeal, through his society, to the House of Delegates next year, at which time the dues can be changed at the will of the majority of the elected representatives of county societies.

There is always the bogy of "the clique." There are such things, we know, but we can never arouse much personal enthusiasm on the subject. It has been our observation that the clique works day and night to keep the society going, only to be overrun on election day, or any occasion when a subject is to be considered involving prejudice and sentiment, regardless. Perhaps the following clipping from a publication known as the *Bob Morris Bulletin*, represents our views:

"What is 'The Clique?' 'Tis a body of men who attend every meeting, not just now and then; who don't miss a meeting unless they are sick—these are the men that the grouch calls 'The Clique.' Who don't make a farce of that magic word, 'work;' who believe in the motto—'Not a job will I shirk.' Who never resort to an underhand trick; these are the men that some call 'The Clique.' The men who are seldom behind in their dues, and who from the meeting do not carry news; who attend to their duties and don't seek a kick; these are the men that the crank calls 'The Clique.' We all should be proud of members like these—they can call them 'The Clique,'

or whatever they please, but there are some people who always find fault, and most of this kind are not worth their salt; they like to start trouble but seldom will stick—and leave all the work to be done by 'The Clique.'"

Again we urge the importance of the county society annual meeting, and insist that they be well attended.

Next Meeting Southern Medical Association will be held in New Orleans, November 24-27. It would be difficult to arrange matters more satisfactory to the doctors of Texas. New Orleans is almost as accessible to many of us as our own larger cities, and we like to go there, meeting or no meeting. There will be a large and enthusiastic attendance from Texas.

The preliminary program and announcements sent out by Secretary-Manager Loranz, are extremely attractive. It would be hard to improve on the scientific program. The sections will meet, as heretofore, in alternate half-day sessions, in order to minimize conflict. The following organizations will meet conjointly: Southern Association of Anesthetists, Monday, Tuesday and Wednesday; Conference of Southern States Statisticians, Monday; Conference of Malaria Field Workers, Tuesday and Wednesday, and Presbyterian Physicians' Missionary Movement, Tuesday.

The usual alumni meetings will be held on Wednesday night. The big opening is scheduled for Monday night, and the last general session for Thursday afternoon. On Friday and Saturday following adjournment, a series of clinics will be given for the benefit of those who choose to remain over for that purpose. The clinics will be held in Charity Hospital, Touro Infirmary, Hotel Dieu, Presbyterian Hospital, Mercy Hospital, Saint Rita Infirmary, Dispensary for Women and Children, and the Eye, Ear, Nose and Throat Hospital. Some of the sections will hold clinics in connection with their programs.

The entertainments will, as might be expected, be extensive and attractive. The usual President's Reception will be held Tuesday evening, in the Atheneum, where the noted carnivals are staged, winding up in one of the justly famous grand balls of this justly famous city. The visiting ladies will be entertained almost continuously through the several days of the meeting.

The usual round-trip rates have been granted, and each member will receive a certificate of membership, which will entitle him to purchase round-trip tickets at the agreed rate. It will not be necessary for members to write for these certificates, but those who have not yet joined the association should write at once, enclosing check for $3.00, in payment of dues for one year, whereupon the membership and necessary certificate will be forthcoming immediately. There are ample hotel facilities in New Orleans, but the wise traveler secures his hotel reservations well in advance. A letter to Dr. J. C. Menendez, P. O. Box 1460, New Orleans, chairman of the Hotel Committee, will get results. The October number of *The Southern Medical Journal* contains a list of the hotels, with rates, as well as other information concerning the meeting.

A trip to the tropics, following the meeting, may be easily arranged for. The United Fruit Company announces sailings the latter part of the week of the meeting. Of particular interest in this respect will be a sixteen-day cruise to Cuba, Canal Zone and the surrounding tropical country. One of the best ships of the fleet sails Saturday, November 29.

To those who have not heretofore interested themselves in the Southern Medical Association, we may say that this organization is one of the chain of organizations contemplated by the original plan of organization of the American Medical Association. It will be recalled that this plan provides for the basic county society; the strictly scientific district society, made up of groups of county societies; the state association; the strictly scientific regional association, made up of groups of state associations, and the all-embracing American Medical Association. All matters of an ethical or business nature are attended to in the county, state and national organizations, the district and regional groups devoting their time exclusively to scientific work.

That the Southern Medical Association has assumed its stated role in earnest may be judged from the following quotation from its constitution:

"The purpose of this Association shall be to develop and foster scientific medicine and medical fraternalism. It shall have no direct connection with or control over any other society or organization, nor shall it at any time be controlled by any other society or organization. All meetings of the association shall be for the sole purpose of reading and discussing papers pertaining to the science of medicine, to public health, and to medical education."

The membership fee is extremely modest, $3.00, which includes subscription to *The Southern Medical Journal*, an extremely satisfactory and pleasing publication. We consider it a privilege to belong to this organization and read its *Journal*, and it is certainly an advantage to our organization to have our members so associated.

ORIGINAL ARTICLES

HAY FEVER.*

BY
ROY L. KELLER, M. D.,
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Batollus observed a case of hay fever in 1565. In 1750, Heberdeen saw a case. In 1899, before the London Medical and Surgical Association, Bostick reported "A Case of Periodical Affection of Eyes and Chest," and in 1828 reported 28 cases of "Summer Catarrh." Between Bostick's first and second report, the name "Hay Fever" was given the affection, but by whom and just when is not known. In 1821, Ellioston attributed the cause of this affection to pollen of plants. In 1873, Harrison Blackley, a Manchester homeopathic physician, after very careful experimental studies, in which he collected pollens from the air on glass plates, counted them, measured them, described their surfaces and shapes, and declared that when the air contained a certain concentration of pollens a subject of hay fever would be affected and when the pollens were more concentrated, another would be affected. He, himself, was a subject of this malady. In these far times, he scarified the skin of patients, inoculated the scarifications with pollens and described the redness, itching and the oedema. He thought pollens of many plants might be responsible for the affection. A short time after this, Douglas Smith in America named timothy specifically as a cause, and in 1898, Lockwood of New Jersey implicated ragweed, but sometimes medical principles are slowly accepted and so in 1895, we hear of John MacKenzie before the American Medical Association complimenting that body because no one made mention of pollens as the cause of hay fever.

In 1911, in Germany, Dunbar after most extensive experiments, confirmed the pollen theory. He considered the poison a true toxin and attempted to make an antitoxin which he called "Pollantin," but it caused such severe reactions that it was never extensively used. In 1906, Wolf Eisner suggested that hay fever was an allergic reaction just as Meltzer, in 1910, suggested that asthma resembled artificial anaphylaxis. In 1911, Freeman and Noon, in the Lancet, gave their results in the treatment of hay fever with pollen extracts. From the time of Bostick to the present, many names for this condition have been used and we shall mention "Summer Catarrh," "Bostick's Catarrh," "Rose Cold," "Rose Fever," "June Cold," "Peach Cold," "Pollinosis," "Anaphylaxis," and "Allergy." In 1898, Richet gave us the name of "Anaphylaxis," meaning without protection, after showing that a dog previously injected with eel serum reacted to a second injection much more severely, and often fatally. Theobald Smith of America had noticed that guinea pigs used for standardizing diphtheria antitoxin were much more susceptible to a second injection of horse serum. Soon Gay and Southard, Vaughn and Wheeler, Rosenow and Anderson, Lewis and Auer in America, Otto in Germany and Besredica in Paris, were investigating this reaction. It was finally generally thought that anaphylaxis was a step toward immunity.

In 1902, Von Pirquet and Schick began the study of reactions following administration of serum and Von Pirquet proposed the name "Allergy," meaning simply "changed cell reactivity," or cells reacting in an unusual and non-customary manner. In other words allergy is a term used for a great group of clinical conditions like hay fever, etc., in which a natural sensitiveness to a foreign substance is exhibited. (This sensitiveness is termed Allergy). On account of our lack of knowledge of the exact poisons, and our lack of knowledge of the manner in which they act, it is difficult to apply a scientific name. We cannot scientifically name something we do not understand, but the tendency is to let the term allergy be the broad conception for the whole class of untoward reactions and reserve the name anaphylaxis for the reaction in which the antigen-antibody-complement principles are involved, and in which the antibody can be passively introduced into a second animal and render this second animal susceptible to the antigen, and in which the antigen is a protein and the reaction is most typically seen experimentally, employing the guinea pig and horse serum, the serum being injected subcutaneously, intravenously or intracerebrally. But arsphenamin, iodoform, quinine, aspirin and many other non-protein substances may cause an unusual reaction, and so allergy would include all unusual reactions to all substances introduced by any manner whatsoever, for example, by mouth, by inhalation, by rectum, intravenously or subcutaneously. Thus urticaria after quinine would be allergy, and a violent reaction after a prophylactic antitoxin administration would be anaphylaxis.

According to Rackimann, there are only three accepted theories regarding the mechanism of hay fever. First, the cells of the patient contain antibodies not present in the cells of normal persons. Second, the cells of the patient lack something which is present in the cells of normal persons. Third,

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 1, 1924.

some substance is present in the blood, acting on the antigen or pollen to make it poisonous. Hence, of the three possible explanations, we accept the theory of antibodies present in the cells of the patient but not found in the cells of normal people.

SUSCEPTIBILITY AND PREVALENCE.

According to Baird, 33 per cent of hay fever patients have a hereditary disposition to the disease. It is generally conceded that women are more subject to it than men. Young and middle-aged persons are more often attacked and the tendency to attacks lessens as age advances. The educated and highly nervous are more susceptible. Dunbar taught that there was but one real cause, pollen, and this he placed on a scientific basis. He claims that the severity of hay fever attacks is in direct proportion to the quantity of pollen present in the atmosphere. The pollen seasons, according to Dr. I. S. Kahn's researches, are as follows: March 1 to April 15, winter grasses; April 1, Bermuda grass; April 10, Johnson grass; ragweed, both giant and small, pollinates in the middle of September, but along with this, many grasses and weeds are still pollinating. We agree with Dr. Kahn's article in the *American Medical Journal* of March 15, 1924, that the most of us have neglected the fall grasses that pollinate in conjunction with ragweed, golden-rod and sunflower, and therefore have not obtained the results that we had anticipated.

We are of the opinion that certain foods tend to aggravate the symptoms of hay fever subjects during their season, as we have had patients tell us they could not eat green corn and fruits, especially peaches, melons, etc.

The records of the American Hay Fever Association, based on extensive reports, indicate that about one per cent of the total population are subjects of hay fever and that it is far more prevalent in the United States than in Europe. According to the following outline, we will observe that it is more prevalent in some states than others. The disease is *fairly common* in Louisiana, Alabama, Mississippi, Georgia, South Carolina, North Carolina and Florida; it is *common* in California, Colorado, Montana, Oregon, Idaho, Arizona, Utah; and it is *most common* in New Mexico, Texas and Washington State.

TREATMENT.

The treatment of hay fever by means of repeated injections of the specific pollen which causes it is, in these times, a well established therapeutic procedure, and as a whole, the results have proven very satisfactory. However, these results are irregular, depending upon the sensitiveness of the individual.

Noon and Freeman, in 1911, published from Wright's laboratory in London, the first reports of the successful treatment of hay fever by active immunization, and in 1913, Clowes first attempted the preventive treatment of the American or autumnal form of hay fever.

Our report is limited to a study of three years experience on cases particularly of ragweed and sunflower. It is obvious that an accurate diagnosis is the first prerequisite to successful treatment. In determining the pollen to which the patient is sensitized, the cutaneous test (first performed by Blackley) is employed, and this test has been adopted in the laboratories of the Samuell Clinic. The chief aim in treatment is to bring the patient to a point of tolerating the toxic material which gains entry through the respiratory tract. Desensitization against the specific excitant assures the patient freedom from symptoms. We do not think it necessary to go into the method employed for the preparation of protein extracts from pollen, as we are all more or less familiar with the literature on this technique.

It is obvious that many factors come into play influencing the successful treatment of the individual case. We do not think any two cases of hay fever are exactly alike; their symptoms, their age at onset, the duration of the disease, the family history of hypersensitiveness as manifested by hay fever, urticaria, etc., are always variable. The skin test is variable. We are of the opinion that the patients who receive the largest doses are not the patients who do the best. We find that, on the whole, doses between 0.6 cc. and 1.5 cc. seem to be the most successful, and are less apt to produce violent reactions.

We urge our patients to present themselves 6 weeks before the usual onset of their hay fever. The first dose was almost always set empirically at 0.05 cc. of the weak, 1-1000 dilution. If the skin test gave a severe reaction, no further treatment was given on that day. Succeeding doses at about 4 to 6-day intervals, were in each case determined according to the amount of local reactions following the previous injection. If the reaction was slight, the succeeding dose was doubled and sometimes trebled. We have been accustomed to continuing our doses until about one week before the usual onset of hay fever and in some cases, we have given an autogenous vaccine in increasing doses at the usual time for the onset with the hopes of combating the symptoms.

We wish to present a few case reports of patients that we treated with specific proteins.

CASE REPORTS.

Case No. 1.—T. T., was a man of 21 years of age, who had had hay fever for five seasons and his attacks had lasted until frost. He said that dust and powders made the attacks more violent. He had never changed climates. His tonsils and adenoids had been removed before he began having hay fever, five years ago. He had used several different local applications in his eyes and nose, which offered temporary relief. He had never had a diagnostic skin test until he came under our observation, two years ago. We found from a cutaneous test that he was very sensitive to sunflower and slightly sensitive to ragweed. We had him to report for treatment 6 weeks before his usual onset. The first treatment consisted of seven minims of sunflower pollen extract. No reaction having resulted in four days we doubled the dose, when in a short time he showed a slight reaction. Six days later, we gave him 3 times the initial dose and produced a rather marked reaction. The 3 succeeding doses were not increased and the reaction was only slight. The average dose was about 1.7 cc. and he received 8 injections. He was then given an autogenous vaccine in increasing doses, ranging from 0.5 cc. to 1 cc. At the time of his usual onset of hay fever, he did not have a symptom. However, he avoided contact with sunflowers, but the succeeding year he allowed himself to come in contact with them, and escaped the symptoms of his usual hay fever.

Case No. 2.—G. C., a man of 24 years of age, had had hay fever for 7 years. His attacks of hay fever came on in the fall, and he had never missed a season since its onset. His tonsils and adenoids had been removed and many local nasal treatments had been given without any relief. This case came under our observation 3 years ago. He had never had the protein sensitization test made. We tested him with the cutaneous method and found him sensitive to sunflower and ragweed. We placed him on practically the same treatment as case number one, and the symptoms the first year were slightly relieved. During the succeeding year we pushed the treatment somewhat stronger, and he did not have hay fever at the usual time and has not had an attack since.

Case No. 3.—M. P., was a woman of 45 years of age, who had suffered fall hay fever for 19 years. During this time she changed climates, going to California where she was relieved to a certain extent for 3 years. She stated that dust and smoke, powders and perfumes, and watermelons seemed to aggravate the symptoms. The attack always came on about August 25 and lasted until frost. She had had the protein sensitization test several times and reacted to golden-rod and ragweeds, both gaint and small. This case has been treated for 2 years in our clinic, and each time we began our treatment about 8 weeks before her usual onset. We treated this case with Mulford pollen extract, using the fifteen-dose package which is divided into three series. The first series consists of from 12.5 to 100 pollen units per dose. The second series consists of from 100 to 125 pollen units per dose and the third series consists of from 200 to 250 pollen units per dose.

(The pollen unit as established by Noon is 0.001 milligrams of the protein nitrogen). These units were given 3 and 4 days apart, and each injection produced a slight reaction. The last injection was given one week after the patient was supposed to have her usual symptoms. This patient has not had the slightest symptoms of hay fever for 2 years.

We wish now to give two or three case reports of patients who entered The Samuell Clinic with histories absolutely typical of hay fever as we know it, that is, typical fall or spring attacks of coryza, itching, burning, discharge from the eyes and nose, fullness and a drawing itching sensation in the throat. Much to our surprise and disappointment, on testing these patients with the Mulford standard diagnostic test, which consists of dried proteins and pollens, dried bacteria, dried vegetable food extracts, dried animal food extracts, dried animal epidermal extracts, such as hair, feathers, wool, horse dandruff, etc., we failed to get a reaction that would justify us in beginning specific treatment.

Case No. 4.—Among the 3 cases that would not react to any of the tests, we placed one on parathyroid, Gr. ½, three times a day; and calcium chloride, Gr. 5, three times a day. This patient was a child seven years of age, who started with hay fever at the age of four, and later developed asthmatic attacks, which lasted from early spring to fall. The mother tells us now that since he has been taking our treatment he has not had any of his usual attacks during the past 8 months and that this is the first time he has had any comfort in years.

Case No. 5.—M. D., a woman of 39 years of age, had had winter hay fever for the past 12 years and had undergone the protein sensitization test several different times, without reacting to any of the tests. She had changed climates several different times and had always received some comfort when in California. We began treatment with Merrell's Protegen Number Four, 2 months before her usual time of onset, beginning with 4 minims and increasing the dose gradually every fourth day until she could tolerate 1.8 cc. She did not have any symptoms of hay fever last year or this year.

Case No. 6.—A. J. M., was a man of 38 years of age, who had had hay fever since the age of 18. The onset varied at different times of the year. He had tried all the treatments that his friends advised. He had had the protein sensitization test and did not react to anything. He had changed climates several different times and had obtained slight relief for two years while in Europe. He had taken serum and vaccine treatment with no avail. Two years ago, he began to complain of stomach trouble, at which time he consulted our gastro-enterologist who diagnosed his condition as gastric ulcer. He was placed on a diet free from meats and acid foods and during the past two years that he has been on this diet, he has not had a symptom of hay fever.

The above three cases came to our clinic and you will observe were treated non-specifically and received marked benefit.

According to Dr. Kahn, we should regard the grasses as the cause of hay fever at the different seasons of the year, and lay some stress on treating these cases with pollen extracts from the grasses, along with our treat-

ment for the pollen that reacted most severely, especially in the fall types of hay fever.

CONCLUSIONS.

1. Satisfactory preseasonal pollen treatment yields excellent results in seasonal hay fever. By satisfactory treatment is meant 6 to 8 treatments with a 1:1000 dilution of the pollen extract, or in some cases a stronger solution.

2. When preseasonal pollen treatment fails, it might be beneficial to use an autogenous vaccine during the season treatment. We think this is worth while especially when, for some reason or other, it is impossible to give preseasonal treatment.

3. Treatment that of necessity must begin late preseasonally, may be continued on through the pollen season with better results than those obtained by during-the-season treatment alone, but with much less beneficial results than those obtained by beginning preseasonal treatment early enough to permit of its discontinuance before the season of pollination begins.

ABSTRACT OF DISCUSSION.

Dr. I. S. Kahn, San Antonio: The two essential factors for success in hay fever work are: first, a correct diagnosis of the offending pollen or pollens, and second, the institution of sufficient immunization to prevent their action. Inasmuch as climatic and rainfall influences in different sections of a large state like Texas differ widely, no hard and fast rules can be made for the naming of either the species of weeds at fault or their various pollination seasons, that will cover the entire state. Botanical conditions in El Paso for example differ widely from those that exist in Beaumont, and both again differ from conditions existing in the Panhandle or in San Antonio. Until pollen calendars are kept regularly by interested observers in various sections of Texas, results of treatment will be unsatisfactory on account of haphazard methods of diagnosis. Most of the medical literature on the subject of hay fever covers the eastern portion of the United States, which certainly is incorrect for San Antonio. Local air analyses for the last year in San Antonio, have given us a fair working pollen calendar, which may or may not be of help in other sections of Texas. This will not be known until similar air pollen analyses are compiled elsewhere and published, so that comparative studies are made possible. This is absolutely necessary as pollen immunization is specific, that is, complete immunization against one pollen protects against that pollen only, except possibly with the grasses, where immunization against one species offers considerable protection against all.

Sufficient dosage to eradicate the initial positive skin tests is the desired requisite and is usually obtainable. The technique of immunization treatment can of course be developed only with practice. Cases of hay fever, at least in San Antonio, are usually due to more than one pollen. Multiple desensitization is perfectly feasible. With preseasonal treatment, results are excellent, and even during the pollination season considerable relief can be obtained by correcting the living environment to reduce pollen contact, by remaining at a beach or downtown in a large city, by avoiding country trips and keeping out of drafts, and by protective oil sprays and occasional hypodermic injections of small doses of epinephrin.

One important precaution is to always have a hypo of adrenalin ready when making these skin tests.

Dr. Keller (closing): I consider the remarks by Dr. Kahn very applicable, and in closing my discussion, it seems worth while to again call attention to the close relation between the mechanism of allergy and of immunity. Specific antibodies are present in both conditions. In allergy, these antibodies are predominantly in the circulating blood. However, in neither condition are the antibodies in one location exclusively. In allergy the symptoms probably depend on reactions which take place in the cells. That no such symptoms occur in immunity is shown by the experiments of Manwaring and Kusama. Reactions following perfusion of the lungs of immune guinea pigs with serum mixtures were obtained, which reactions were entirely analogous to those obtained with the lungs of anaphylactic guinea pigs. The fact that, in life, immune guinea pigs show no reaction to injections of the specific antigen, although it is clear that their cells do contain fixed antibodies, must be explained by the protection afforded by the excess of circulating antibodies. The difference between allergy and immunity, therefore, depends on whether antibodies are predominant in the cells or in the blood.

CAUSALGIA.*

BY

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DALLAS, TEXAS.

Causalgia is a term first used by Weir Mitchell, shortly after the Civil War, in describing a burning pain, usually in one of the extremities, following gunshot injuries. Mitchell stated that, "Further study led us to suspect that irritation of a nerve at the point of the wound might give rise to changes in circulation and nutrition of the parts in its distribution, and that these alterations might be of themselves of a pain-producing nature." The derivation of the word is from two words, one meaning heat and the other pain.

In the beginning the disease presents exacerbations and remissions, and occasionally, complete intermission. It shows a strong tendency to occur in nocturnal paroxysms usually lasting throughout the night. The pain is greatly increased by the application of warmth, attempts at motion, and contact with such articles as the bed clothing. When it occurs in the hand, that extremity is nearly always held in dorsiflexion and in this way strongly contrasts with the position in cases of nerve paralysis. Where an amputation has been done the pain usually starts in the region of the scar tissue and gradually spreads up the extremity. In the beginning of the process, the parts will be engorged with blood at times, and blanched at others. Some patients describe a tendency to pro-

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, May 1, 1924.

fuse sweating, but this usually passes away and the skin becomes dry and glazed.

ETIOLOGY.

The early writers on this subject were of the opinion that the symptoms were produced by trauma of the nerve, but in their descriptions they noted the fact that the involved area was not strictly limited to the distribution of a single nerve and besides the character of the pain differed in many respects from that in nerve lesions.

The exact etiology of this condition remained in doubt until the researches of Leriche, who published his first paper in

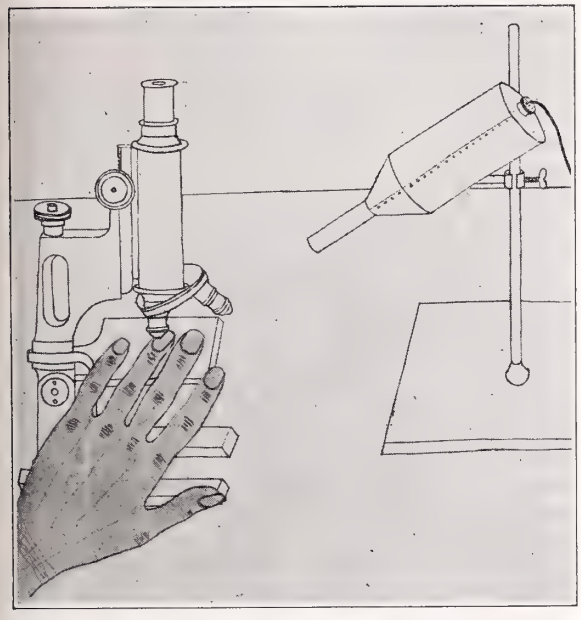

FIG. 1. Focal Illumination of Capillaries (Weiss).

1913. Working upon the problem for some time, he noted that the painful phenomena were closely connected with vasomotor changes in the part involved and he drew the conclusion that the phenemona were secondary to the involvment of the periarterial sympathetic plexus. It is usually considered that pain is due to peripheral nerve irritation and that it travels along somatic nerves, yet in this condition, the sympathetic unquestionably plays a part in several ways. It is noted that even though a nerve like the median or sciatic may be divided, the pain will continue, in which case the impulse would have to travel along anastomosing sympathetic fibres in a centripetal direction.

A study of the sympathetic nervous system shows that its point of origin in the spinal cord is to be found in the lateral horns of the grey matter. From here fibres pass out to form the sympathetic ganglia, from whose cells fibres originate which pass, along with fibres coming from the root ganglia of the central nervous system, to their distribution in the tissues. Efferent impulses from the periphery apparently reach the sympathetic center in the spinal cord over fibres which accompany the afferent nerves of the central nervous system. In some regions these sympathetic ganglia are collected together in larger groups, such as the solar plexus, while each of the larger organs has a similar ganglion for its demands. Sympathetic impulses pass out from the ganglia to the blood vessels along with the nerves of sensation and motion and reach the blood vessels through a plexus of fibres surrounding them, just beneath their outer coats. In the extremities, Todd, Cramer, and Todd pointed out that, "The more distant arteries are supplied by sympathetic fibres which have traveled to their destination along special nerve trunks and not along main vessels. These twigs are distributed to the vessels from nerve trunks at intervals, the intervals growing shorter as the more distant portions are reached, as though a greater nerve wealth were needed in these parts."

DIAGNOSIS.

Some confusion appears in the literature in attempts to distinguish between causalgia and the ordinary painful stump of amputation. In the latter condition, there is usually a sharper limitation of the area complained of and an absence of the vasomotor symptoms described. In causalgia, the patient usually describes the pain as burning in character and the limits of the area involved are not usually sharply marked, the application of heat causes a sharp increase in the pain, while cold seem to relieve it. As the process spreads, the skin becomes glazed and dry, and the limb is always carried in a guarded position to prevent contact with external objects. Although the pain may occur at any time of day, it is apt to be more pronounced in the early evening, causing the patient loss of sleep. If reamputation is performed the pain usually continues, unless the amputation is done higher up, well above the lesion and before it spreads upward. Although trauma is a strong etiological factor, yet some cases occur from other causes, even in amputation of the fingers.

TREATMENT.

In the literature, all sorts of methods, such as hydrotherapy and electrotherapy, have been described, but most non-operative measures are doomed to failure. The operative method adopted by Leriche seems to have yielded better results than any others that have been employed. Leriche isolates the artery for a space of 8 to 10 cm. The exte-

rior coat of the artery is seized and drawn out of the wound, and a sharp knife or forceps are then used to decorticate the artery for a space of 8 to 10 cm. When the artery is seized, a marked contraction of its coat occurs, pulsation ceases, and its size is greatly reduced. As the external layer is removed, the size progressively diminishes, and in the larger arteries the reduction may amount to

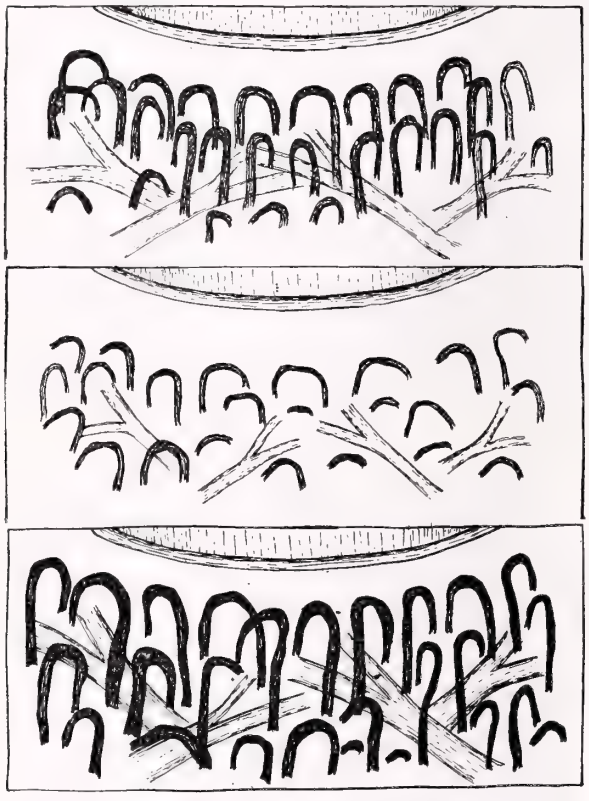

FIG. 2. Normal Capillaries by Focal Illumination.
FIG. 3. Capillaries in Causalgia, before periarterial sympathectomy.
FIG. 4. Capillaries Following Periarterial Sympathectomy.

as much as one-fourth of its normal size. This diminution usually involves the area which is decorticated. The pulse, in the parts distal to the operation, disappears but the circulation is not entirely interrupted. Changes in the capillary circulation can be accurately observed under the microscope by anointing the skin with immersion oil just back of the nail bed, and employing focal illumination from above and to the side.

Following the operation, there is loss of temperature in the extremity, followed by an elevation of temperature of 3 or more degrees above normal, unaccompanied by a general rise in temperature. This is accompanied by a rise in blood-pressure in the operated side above that of the healthy one. The pain and burning is usually increased at the height of the reaction, but disappears by the fourth week, being much ameliorated in the first week. Leriche was of the opinion that this vasodilatation was responsible for the good results of the operation, but Bruening and Stahl are of the opinion that in addition to the vasodilatation, there is a transposition of the entire vascular function on account of the interruption of the sympathetic.

The return to normal in the circulatory apparatus, strongly emphasizes the automatic nature of the nerve-vessel apparatus. On account of the close connection between the sympathetic ganglia throughout the body, it is easy to understand how there can be an elevation of arterial pressure in the arm after section of the sympathetic in the neck, as described by Claud Bernard.

That Leriche is correct in his contention that the pains are produced by an involvement of the sympathetic is proven by such cases as that of D'Agatha[1]. In his case, there was a complete paralysis involving the brachial plexus, accompanied by causalgia. After the nerve was completely freed, the pain subsided, and although there was progressive improvement in the paralysis, the causalgia persisted for two months, at which time a periarterial sympathectomy was performed, followed by recovery and relief of pain. Turco also describes a case in which, although the median nerve was severed, there was no relief of pain, and which was relieved by the decortication of the humeral artery.

Mosti[2] describes an extremely severe case of causalgia in which the artery was injured by a projectile. The sheath of the humeral artery was involved and the artery itself was obstructed. The obstruction was removed, followed by decortication of the artery, and the operation resulted in a complete recovery.

Dean Lewis[3] reports a series of cases of causalgia, in which neurolysis failed to relieve the patients, but the injection of the nerve with 60 per cent alcohol brought about the desired result. The probable explanation for the relief obtained in these cases, is that the injection of alcohol into the nerve sheath produced a paralysis of the sympathetic fibres which pass out at intervals to the arteries. In that respect it would have the same effect as the decortication of the artery. The disadvantage, however, is that a permanent lesion might occasionally be produced in the nerve. Injection of the four points surrounding the artery with alcohol, also produces relief in the milder cases. In

1. D'Agatha: Chirurgia Delgi Organi de Moviment, Bologna, February, 1919, No. 13.
2. Mosti: Poloclinica, Rome, May 25, 1919.
3. Lewis, Dean: Jour. A. M. A., January 3, 1920.

one case, relief was obtained by the intra-arterial injection of quinine and urea. After the artery had been entered, constriction of it from above enabled the artery to empty itself; the solution was then injected and a gradual return of the flow in the artery was allowed to occur. The pain was heightened for a few hours and the capillaries (under the microscope) showed marked constriction, followed by dilatation and relief of pain. Such simple measures may be of assistance in the milder type of cases, but in the severer ones periarterial sympathectomy, after the technique of Leriche, should be performed.

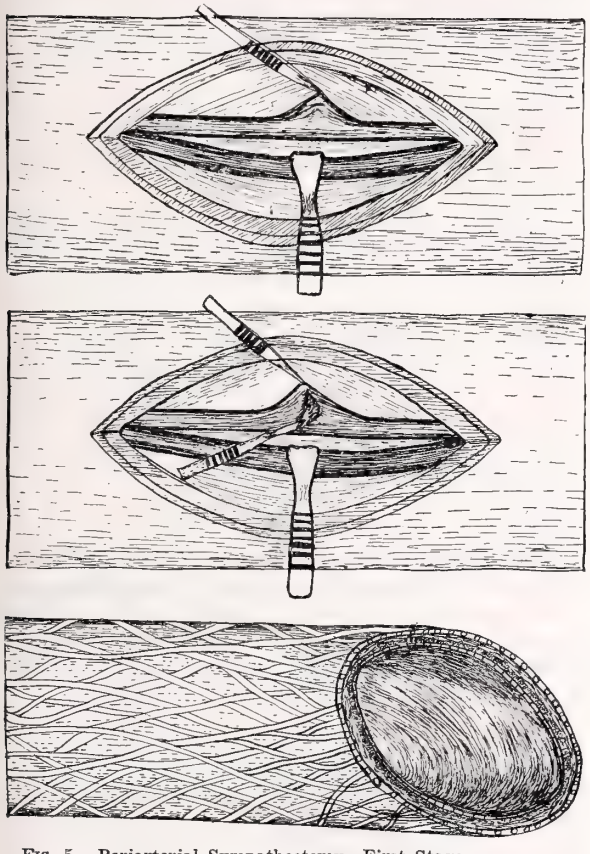

FIG. 5. Periarterial Sympathectomy—First Stage.
FIG. 6. Periarterial Sympathectomy—Second Stage.
FIG. 7. Sympathetic Fibers of Vessel Wall.

CASE REPORTS.

Case No. 1.—W. T. H. The patient received a crushing injury of the hand in the region of the thumb and wrist, in which a small piece of glass was driven into the flesh near the radial artery, the wound healing by first intention. The patient complained of pain, a burning sensation in the palmar surface of the thumb, which gradually spread upward toward the base of the thumb. This area was extremely tender, the application of heat increasing the pain, but it being relieved by cold. There was no paralysis of motion, but motion of the thumb produced pain. Sensation was markedly blunted and the skin had a dry glazed appearance. At operation the nerve was exposed but was uninvolved, so the radial artery was decorticated for a distance of about 3 cm. The patient had complete relief of both pain and disability.

Case No. 2.—J. E. O. This patient had an infection of the middle finger of the right hand, from a rose thorn. The finger was amputated, following which a marked pain, a burning sensation, started in the amputation wound. The *x*-ray showed the bone in good condition and there was no evidence of infection in the operative wound. The pain gradually progressed until it involved the hand and forearm. Intraarterial injections of quinine and urea were used, which were followed by marked relief of pain. After the pain had subsided, the usual orthopedic measures were carried out to restore the usefulness of the limb. There was a slight return of the pain a few months later, which however produced no marked disability. A better result could have been obtained by decortication of artery, but this was refused by the patient.

Case No. 3.—C. E. M. The patient had suffered a crushing injury to the distal phalanx of the thumb, which was amputated. This was followed by a marked burning pain, unrelieved by injections of alcohol and local anesthetics. Reamputation was performed near the base of the thumb. The pain continued, spreading gradually over the hand and up the arm, until it involved almost the whole shoulder. The nerve was injected, by another surgeon, on three different occasions with increasing strengths of alcohol, but without relief of pain. Operative measures were refused by the patient. When seen three years after the accident, the patient was still suffering a great deal of pain and discomfort in the entire extremity, and was unable to use the parts at all.

RECONSTRUCTION OF THE INTERNAL LATERAL LIGAMENT OF THE KNEE.*

BY

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The internal lateral ligament, though powerful, is in reality only a thickening of the capsule of the knee-joint. It is broad and ribbon like and passes obliquely downward and forward from just below the adductor tubercle to the internal condyle of the tibia, about one and one-half inches below the joint level. It is usually described as consisting of a long outer portion and a shorter deep portion, and also as having anterior and posterior fasciculi. The deep portion of the ligament is firmly attached to the internal semilunar cartilage.

The chief complaint of patients with rupture of the internal lateral ligament is instability of the knee when the leg is in full extension. If seen late, pain and tenderness may not be present. If the limb has not been used there may be little or no effusion; but pain, tenderness and effusion into the joint are present after much use, and the greater the trauma the more pronounced are these symptoms.

The diagnosis of rupture of the internal

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 30, 1924.

lateral ligament of the knee can usually be made by determining the power of abducting the leg on the thigh in full extension. On account of the oblique direction of the ligament, flexion of the knee relaxes it and therefore allows lateral motion, but there is no normal lateral motion in full extension. A careful history will usually reveal that the strain forced the leg into abduction, with or without twisting, and most likely with the knee in extension.

The patient, J. M., a baseball player, aged 24, on June 1, 1922, collided with another player, who fell across his left knee, throwing the weight of his body on the outside of the patient's knee, and forcibly abducting the leg. He was kept in a hospital in another city with the knee in plaster for five weeks, then for two weeks more he wore a splint and was up on crutches. Seven weeks after the accident, he began exercising to get into condition to play. He was sold to Houston and reported on August 1, two months after the accident. He played third base in 11 games and acted as pinch hitter in 25 games, during the remainder of the 1922 season. This detailed report of his baseball record is given in order to show the value of the player to his team, and also to give some idea of the practical side of his disability. He was not considered in condition to play his regular position at second base during the 1922 season, but was kept in the less active position at third base. During the training season of 1923, his knee gave trouble and as the season went on the knee became progressively worse, requiring less and less strain to throw it out of place, until a miss-step or only a slight strain would cause the knee to give away under him. This was especially prone to happen as he pivoted on the affected knee, in turning bases. On June 22, he was taken out of the game entirely, and on July 7, 1923, he was operated upon by the writer for repair of the internal lateral ligament.

This patient knew nothing but baseball and before his injury was considered "big league material." Consequently, it was not only necessary to restore the knee to ordinary usefulness, but to secure a result that would hold up under the severe strains demanded by the game, and to do this in a way that would not in any manner limit function or slow up his action.

Many operations have been devised and used with reported success in this class of injuries, but only the following three were considered applicable to this case: (1) McMurry's, in which the sartorius is utilized to replace the ligament; (2) Edward's, employing the tendons of the gracilis and semitendinosus, and (3) Wilson's, in which the folded, pedunculated facial flap is used.

McMurry's operation was discarded in this case, because the powerful development of the patient's muscles presupposed an immens sartorius tendon, which would require too large a groove in the condyle for its fixation, and the operation impair the action of the muscle, which is important in running. This greatly developed muscle would also be extremely difficult to hold, if once implanted into the condyle. At operation, we were extremely glad that we had not chosen this method, as the belly of the sartorius was found to extend down across the joint and only became tendinous as it spread out for its insertion.

Edwards has devised the following admirable operation for reconstructing this ligament:

The tendons of the gracilis and semitendinosus are exposed by pulling the sartorius forward. These tendons are divided at the level of the medial condyle and dissected free, then the distal portions are fastened into a groove about the superior insertion of the ligament. A staple is used for this fixation, after which the fibrous tissue is stitched over the ends.

The distal ends of the proximal portions of these muscles are sutured to the sartorius. The sartorius is pulled back and the deep fascia sutured to it to hold it back, thereby maintaining as nearly as possible the proper direction of pull for all three muscles.

This, as stated before, is an admirable operation and, notwithstanding the fact that I prefer it to McMurry's and believe it furnishes ample support for the knee, I was loath to hamper in any way this particular patient's muscle action.

Wilson has devised a method of using a pedunculated flap of fascia lata folded over the torn ligament and buried in grooves in the femur and tibia at about the normal insertions of the ligament. This operation has decided advantages over those previously mentioned, in that it does not disturb the muscle balance about the knee and is much simpler and easier to perform than the Edward's operation. It was at first decided upon as the one best suited to the case under consideration, but fearing that the knee might give away under the continuous severe strain which this patient would place upon it, a modification was devised which is in reality a combination of the Edward's and the Wilson operations. The tendon of the semitendinosus was used in addition to the folded pedunculated flap of fascia.

The insertions of the semitendinosus and sartorius are so near to each other that it

was decided that the semitendinosus was best suited to our purpose; that if the distal end of the proximal portion was securely sutured to the sartorius, practically no function would be lost. It was necessary to make an incision nearly 12 inches long to properly expose the fascia and tendons. The sartorius was found to be unusually large and fleshy quite to its insertion, being nearly as large as two fingers where it crossed the joint. The semitendinosus was easily located and divided after measuring the length needed. The distal part of the tendon was dissected free down to its insertion and the tendon scraped free of loose tissue and scarified. A groove was prepared at the superior insertion of the ligament and the tendon sutured into it, the sutures passing through the periosteum and cortex. Next a section of fascia was brought down over the superior end of the implanted tendon, placed in its groove and the flap of periosteum and cortex sutured over it. The folded flap of fascia was thoroughly scarified and buried under as much tension as possible in a groove in the tibia at a point just posterior to the tendon of the semitendinosus, acting as the posterior fasciculus of the ligament. These transplanted structures were sutured to the capsule on either side throughout their entire length. The distal end of the superior portion of the semitendinosus was tightly sutured to the sartorius; the fascia and the skin closed.

The leg was put up slightly flexed in plaster, which was left on for four weeks. Following this, a brace was applied, which the patient wore for seven weeks. It was decided to keep this knee immobilized longer than one would ordinarily like to, to prevent a strain on the transferred tissues. There was only slight stiffness which was easily overcome.

Mention has been made of scraping and scarifing the tissues. This is absolutely necessary if firm union is expected. Where the union of fibrous tissues is desired, and especially where much strain is to be placed upon such structures, all areolar tissues should be removed and raw surface placed in contact with raw surface over as great an area as possible. This applies as well to union between bone and fibrous tissue. If the areolar tissue is not removed, the union will be no stronger than the areolar tissue. I would have preferred to have passed the tendon and fascia through holes in the bone, but this was not done because of the size of the tissues used and the proximity to the joint.

At the beginning of the training season, just passed, this patient reported for duty with his team. He was at that time in good condition, with the affected knee apparently as good as its fellow. While running into the club house he slipped and fell, striking the same knee on the corner of the door step. This caused some effusion into the joint which cleared up very readily under treatment. This last accident was an entirely new trauma and did not affect the old injury, nor was it affected by it, though it has delayed him somewhat in getting into condition. So far he has not played his regular position, but is being kept in right field until he gets into condition.

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ABSTRACT OF DISCUSSION

Dr. Chas. Clayton, Fort Worth: I agree with Dr. Bost in the selection of Wilson's operation in this class of cases. From both the anatomical and mechanical standpoints it is pre-eminently the best procedure that has been devised for this condition. I have had no experience with the technique of employing the semitendinosus with the fascia lata, though in cases such as the one with which Dr. Bost was dealing, where the joint is to be subjected to great stress, it seems to me that the procedure is an admirable one. I prefer the osteo-periosteal flap to the drill holes in the bones as a method of attaching the fascial ligament. This method, if allowed sufficient time to mature, gives equally as good an attachment, without the danger of joint irritation which the other method entails.

I believe that we should employ protection for the joint following this operation for a longer period than was employed in this case. Wilson himself recommends immobilization in plaster for about 8 weeks, to be followed by the use of a caliper walking brace for from 4 to 6 months longer. If such prolonged convalescence is irksome to the patient during its passing, this is more than compensated for by the feeling of comfort and security in the joint which he enjoys later.

Dr. Ben L. Schoolfield, Dallas: I want to congratulate Dr. Bost on the satisfactory result he has obtained in this case. I wish to add also that such an operation might have been prevented had the case been properly handled in the first place. The internal lateral ligament should have been carefully sutured and the knee thoroughly immobilized immediately after the accident, and it is quite likely that a good result would have been obtained.

Dr. Bost (closing): I had hoped to have this patient here to show you. He is now playing third base for Houston. I well recall the strain on this knee, that is, in turning bases, etc., I believe he will have perfect function.

Hectine.—Hectine is said to be sodium benzosulphoaminophenyl-arsenate and, therefore, is similar in composition to the product "Atoxyl." Atoxyl is one of a class of arsenical preparations, the use of which has been generally discontinued in favor of the products of the arsphenamin type. Hectine has not been accepted for New and Nonofficial Remedies, nor has the American agent, George J. Wallau, Inc., requested such recognition by the Council on Pharmacy and Chemistry.—*Jour. A. M. A.*, Sept. 20, 1924.

OBSERVATIONS UPON THE NEWLY BORN.*

BY

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In the service of the newly born at the Touro Infirmary, the responsibility of the baby is placed with the pediatric department immediately after the cord is tied. In this way an excellent opportunity is had for the intensive study of the infant in the first days of life, as well as the diseases to which it is subject. In the routine that is in vogue in this service many interesting pieces of information have unfolded themselves which are worthy of our attention. While the problems of the newly born may be considered under three general divisions, namely, (1) the maintenance of body temperature, (2) the nutrition of the infant, and (3) the study of the injuries and diseases of the newly born, none has proven of greater interest than the study of the body temperature. Attention was directed to this study when it was first noticed that the initial loss in body weight was less than is usually described by authors, and that the period of regain of body weight to the birth weight was shorter than ordinarily recorded. Realizing that there must be an intimate relation between the conservation of energy and the diminished loss in body weight and the short curve to return to the initial weight, observations were begun upon the temperatures.

We know that new born infants cannot easily maintain their temperature equilibrium because of their imperfectly developed heat-regulating mechanism. This is noticed to a greater degree in the premature infant. The accepted reasons for this phenomenon are: (1) the feebly developed heat center of the brain; (2) the defective excitability of the respiratory center which makes the metabolic processes slow and feeble; (3) the insufficient ingestion of food due to the feebleness of the infant with its resulting diminished heat production; (4) the proportionately greater surface area of the skin as compared with the body weight and the consequent greater heat loss, and (5) the diminished amount or absence of the subcutaneous adipose tissue.

The routine which had been in operation before this particular study was instituted was decided upon for the purpose of preventing heat loss on the part of the baby with the hope that its problems would be diminished thereby. It is as follows: Immediately after the cord is tied the baby is wrapped in a warm blanket. After the care of the eyes according to the Crede method, the infant is oiled with warm olive oil which is done with as little exposure as possible, and is wrapped again in the blanket and placed in its crib. The interval between delivery and placing in the crib is about 10 or 15 minutes except in unusual instances. With the exception of being put to the breast every 6 hours for the first 24 hours it is not removed from the crib. No bath is given until the morning after which the baby is 24 hours old. In this way the heat regulating apparatus is permitted to become adjusted and no additional and unnecessary burden is placed upon the baby. This plan was adopted because of the wide variations in weight and the irregular temperatures previously recorded. Every morning, when making rounds, a perspective is presented showing the temperatures and weights of each newly born. In this way a correlation of the temperature with the weight curve is had which is of decided value in determining the progress of the infant and in giving evidences of the beginning of any pathologic process which may be manifested by means of an abnormal temperature. It is worthy of mention that whenever the temperature is elevated there is an increase in weight loss, and conversely, where the weight loss is excessive there is usually an elevated temperature.

In this study observations of the temperature were made in 105 cases and recorded as follows: (1) the temperature taken immediately after delivery; (2) when the infant was deposited in the nursery; (3) six hours after birth; (4) just before the bath; (5) just after the bath; (6) six hours after the bath, and (7) twelve hours after the bath. The temperatures were all taken by rectum and the readings made were actual, *i. e.*, without any deductions. The idea of not giving the initial bath until the baby is at least 24 hours old is to permit the heat regulating apparatus to adjust and stabilize itself with the hope of restricting the loss of body weight and thereby increasing resistance.

The results of the observations upon the temperatures showed: At birth the average temperature was 98.4 deg. F., with 44 instances in which the temperature was above and 27 instances below the average, and with variations ranging from 97 deg. F. to 99.8 deg. F. When brought to the nursery the average was the same, namely 98.4 deg. F. with 47 instances above and 26 instances below the average, the variations ranging from

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924. From the Newly Born Service of Touro Infirmary, and the Department of Pediatrics of the School of Medicine, Tulane University.

97 deg. F. to 99.4 deg. F. The average temperature after 6 hours was 98.5 deg. F. In 57 instances the temperatures were above, and in 37 instances the temperatures were below the average for this period. The variations ranged from 97 deg. F. to 99.4 deg. F. Before the bath the average temperature was 98.6 deg. F. In 44 instances it was above and in 27 instances it was below the average. The variations ranged from 96 deg. F. to 100 deg. F.

After the bath the average temperature was 98.5 deg. F. In 46 instances it was above and in 53 instances below the average, with variations from 96 deg. F. to 100 deg. F. The average temperature 6 hours after the bath was 98.8 deg. F. In 29 instances it was above and in 47 instances it was below the average, with variations from 97.4 deg. F. to 100 deg. F. Twelve hours after the bath the average temperature was 98.7 deg. F. In 31 instances it was above and in 46 instances it was below the average, with variations from 96 deg. F. to 100 deg. F.

Between the time of birth and the time the baby was placed in the nursery there were 21 instances in which the temperature rose, the variations being from 0.1 deg. F. to 0.6 deg. F. with an average of 0.2 deg. F.; and 15 instances in which there was a loss recorded, the variations being from 0.2 deg. F. to 0.4 deg. F., and an average of 0.26 deg. F., and in the remaining instances the temperatures were stationary. As compared with the birth temperatures, at the end of 6 hours in 37 instances there was a rise recorded, the variations being from 0.2 deg. F. to 1 deg. F. with an average of 0.4 deg. F.; and in 29 instances a loss, the variations being from 0.2 deg. to 1.6 deg. F. with an average of 0.4 deg. F. In the remaining instances the temperatures had remained stationary.

The effect of the bath is of interest. In comparing the temperatures before and after, it was found that in only 8 instances was there a rise noted, the variations being from 0.2 deg. F. to 0.4 deg. F., with an average 0.2 deg. F. plus; whereas in 60 instances there was a loss recorded, the variations being from 0.2 deg. F. to 1.2 deg. F., with an average of 0.4 deg. F. The temperatures in the remaining instances were stationary.

The temperatures taken 6 hours after the bath compared with the birth temperatures showed a rise in 36 instances with variations from 0.2 deg. F. to 1.8 deg. the average being 0.5 deg. F. plus; in 23 instances there was a loss with variations from 0.2 deg. F. to 1.2 deg. F., the average being 0.4 deg. F. In the remaining instances the temperatures were stationary. The 6-hour temperature reading after the bath compared with the temperature after the bath showed the following: In 46 instances it had risen, the variations being from 0.2 deg. F. to 1.2 deg. F. with an average of 0.4 deg. E.; and in 37 instances there was a loss with variations from 0.2 deg. F. to 1.2 deg. F., the average being 0.4 deg. F. plus. In the remaining instances the temperature were stationary.

The temperatures taken 12 hours after the bath compared with the birth temperatures showed a rise in 27 instances with variations from 0.2 deg. F. to 1.8 deg. F., the average being 0.7 deg. F., in 18 instances there was a loss with variations from 0.2 deg. F. to 0.6 deg. F., the average being 0.3 deg. F. In the remaining instances the temperatures were stationary. The 12-hour temperature following the bath as compared with the temperature before the bath showed a rise in 29 instances with variations from 0.2 deg. F. to 1.4 deg. F. the average being 0.6 deg. F.; in 31 instances there was a loss recorded, the variations being from 0.1 deg. F. to 1.6 deg. F., with an average of 0.4 deg. F. In the remaining instances the temperatures were stationary. Comparing the 12-hour temperature following the bath with the temperature after the bath it had risen in 50 instances varying from 0.2 deg. F. to 1.4 deg. F., the average being 0.4 deg. F.; and in 18 instances it had fallen, varying from 0.2 deg. F. to 1.4 deg. F., the average being 0.4 deg. F. In the remaining instances it was stationary.

The temperatures of the babies for nine days following birth were rather stationary, carrying the conviction that the plan instituted was conducive to stimulate the vigor of the infant. There were fluctuations, however, which ranged from 0.2 deg. F. to 2.1 deg. F., with an average of 0.8 deg. F., excluding the cases of acute inanition, which develop owing to insufficient breast milk.

The effect of assisting to stabilize the heat regulating apparatus apparently had a satisfactory influence upon the body weight of the infant. Various investigators have shown from their studies that the initial loss of weight continues from 3 to 5 days, and the loss is stopped by the incoming of the breast milk supply. The initial loss has been shown to be from 7 ounces to 11 ounces or an average of 9 ounces, and the period to regain the initial weight from 8 days to 2 weeks, or an average of 11 days.

In this study the birth weights of the infants ranged from 5 pounds 3 ounces to 9 pounds 4 1/2 ounces. The average loss was 6 3/8 ounces. The greatest loss recorded was 1 pound and 1 1/2 ounces, and the smallest loss 1 ounce. The average period of loss

of weight was 3 1/2 days. The variations were, for the longest loss 8 days, and the shortest 2 days, with two exceptions to be mentioned. The average time to regain the original birth weight was 6 days, the longest period was the ninth day and the shortest the third day. There were two instances in which there was no loss in body weight, the infants thriving from the beginning, one weighed 6 pounds 3 ounces, and the other 7 pounds 4 ounces. In 27 instances of acute inanition in which the temperature was elevated above 100 deg. F. it was noted as follows: In 5 instances it rose on the second day, in 6 instances on the third day, in 10 instances on the fourth day and in 1 instance each, on the sixth and eighth days. The temperature remained up for 1 day in 15 instances, for 2 days in 10 instances, for 4 days in 1 instance, and for 5 days in 1 instance. In the instances of acute inanition the greatest loss of body weight coincided with the period of highest temperature. The readjustment was immediately brought about with the feeding of lactose and sodium citrate, when the temperature quickly subsided and the weight loss stopped. At no period of life is promptness of greater value than at this one, and an early recognition of disease permits of its immediate attention, resulting in more favorable prognoses. In the case of elevated temperature, if acute inanition is ruled out of the diagnosis, promptness in the recognition of other pathologic processes will greatly increase the chances of the infant.

There are occasions when the infant cannot be relied upon to adjust his heat regulating mechanism and when outside assistance is indispensable, as for example in the premature or congenitally weak babies, and in some cases of injury. Time and space will not permit of a consideration of this special problem at length. Suffice it to say, however, that in such instances no bath should be given and external heat is indispensable and either an improvised incubator made with a crib or a true incubator should be employed, preferably the latter. In the cases of injury in the infant of normal average size the period of time in the incubator is usually short; it should be sufficiently long, however, to permit of a satisfactory proof of the ability of the infant to maintain a uniform normal temperature, as the artificial external temperature is gradually reduced and discontinued. With the premature and congenitally weak the period of detention in the incubator should be sufficiently long to permit not only of the maintenance of the uniform normal temperature, but also of the development of the infant to a condition of sufficient vigor, as shown by his lusty cry, good appetite, muscular activity and sufficient gain in body weight, to warrant its removal from the incubator. There are times when even the expenditure of energy incident to sucking is sufficient to retard the progress of the infant. In such instances tube feeding should be resorted to. As a matter of fact, with the congenitally weak it is always advisable to begin with tube feedings rather than to wait for a complicated problem to arise. These tube feedings should be discontinued only when the infant shows its ability to feed otherwise, either with a Breck feeder or a bottle or from the breast, while at the same time maintaining a normal body temperature and a steady gain in weight.

SUMMARY.

1. The heat regulating mechanism of the newly born is unstable.
2. Even under the most favorable conditions variations in the temperature may occur.
3. These variations may to a great measure be restricted by careful attention.
4. By restricting these variations, the energy loss is apparently diminished as is shown by: (1) A shorter period of body weight loss; (2) a minimum loss in body weight, and (3) an earlier return to the birth weight.
5. The delay of the first bath until the baby is at least 24 hours old assists in controlling the infant's heat-regulating mechanism.
6. The bath, even at this time, showed its effect in causing a body temperature loss in 60 instances as compared with a rise in only 8 instances.
7. After the bath there was a reactionary rise in temperature.
8. The temperature showed a slight but steady rise from birth, with the exception of a slight loss recorded after the bath.
9. The cases of acute inanition were of short duration and the body loss was prevented from becoming excessive as the result of immediate attention.
10. By the plan employed in this study, pathological temperatures are readily recognized, giving the infant the greatest possible chance.

From the foregoing it can be readily seen that the maintenance of body temperature is not a problem which can easily be neglected in connection with the normal newly born, and especially in premature or congenitally weak infants.

ABSTRACT OF DISCUSSION.

Dr. H. Leslie Moore, Dallas: Dr. DeBuys is an authority on diseases of children, and a pioneer in

the field on observations of the newly born. We are fortunate to have him with us to present this interesting paper.

Dr. S. P. Rice, Marlin: What is the doctor's rule in giving the newborn water? He states he puts the baby to the breast every 6 hours. How long does he continue this before making a change?

Dr. J. H. Parke, Houston: Has the doctor noticed any changes in the baby with regard to the length of time the head is under compression?

Dr. DeBuys (closing): In reply to the question of Dr. Rice, many of the babies receive no water during the first 24 hours; some, however, get from 4 to 8 ounces. The baby is put to the breast every 6 hours for the first 24 hours, and every 4 hours in the second 24 hours, and then the interval decided upon depends upon the size of the baby.

In reply to Dr. Parke, those babies whose heads are under pressure for a prolonged period usually show some somnolence. This is so marked at times as to require a differential diagnosis from injury. When there is an injury, it is important to feed the baby by tube, inasmuch as it will not nurse.

The weights of the babies are watched daily. If the weight loss is excessive, a lactose solution is given, and should there be a tendency to the development of acute inanition, alkali in the form of sodium citrate is administered.

SCHOOL FOLLICLES.*

BY

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My reasons for writing upon such a simple condition as "Folliculosis," are as follows:

Last year, at the mid-summer meeting of the Southwest Texas District Medical Association at Corpus Christi, a county health officer from the Rio Grande Valley presented a paper on this subject. He advanced the theory that the condition was contagious and that children so affected should be excluded from the public schools. Acting in his capacity as county health officer he had excluded scores of children from school. The discussion of this man's paper brought out the fact that health officers in other counties were doing the same thing. To deprive a child of the privilege of an education is an extremely serious matter, the far-reaching effects of which are almost inconceivable. I have written this paper with the thought of those children in mind.

About four years ago the daily papers carried a news item to the effect that physicians of the United States Public Health Service had been examining the public school children of Belton, Texas, and that they found trachoma epidemic among these children, and that these same physicians had established a free clinic where scores of children were being operated upon by the "experts" of the Public Health Service. On a certain day, so the story ran, sixty children were operated upon for trachoma. Much other data followed in regard to the enormous number of trachoma cases found among the school children of Texas, and of the wonderful work being done by the "experts."

I am writing this paper with the thoughts of those children before me, being led "like lambs dumb before the shearer," to be subjected to a painful and dangerous operation upon their eyelids. If, therefore, I succeed in saving one child from a useless operation, or from being deprived of an education that his parents' taxes help to pay for, I shall not have labored in vain in preparing this brief paper upon a subject that is almost ignored by the average text book.

In De Schweinitz's Text Book, page 214, occurs the following: "Follicular Conjunctivitis; Follicular Ophthalmia; Follicularis Simplex; Trachoma Folliculare; Folliculosis; 'School Follicles.' "

This last name appealed to me because in so many cases there is no conjunctivitis present, only follicles. Also because 90% of the cases are found among school children.

De Schweinitz says, "The descriptive term 'conjunctivitis' may be applied to the affection *if the signs of inflammation are associated with it.*" If the latter are absent, the term "folliculosis of the conjunctivae" is more appropriate, or *"school folliculosis."*

Fuchs uses the term "Follicular Catarrh" to describe folliculosis accompanied by secretion and infection. He says: "In many school children the condition exists in a perfectly latent form, there are no symptoms, and it is discovered only by medical examination. In other cases, the disease has an acute character; a conjunctivitis sets in with all the characteristic symptoms."

DEFINITION.

Folliculosis is a subacute or chronic affection of the conjunctivae with little or no inflammatory reaction, occurring in children and young adults of lymphatic temperament, without regard to present social or physical conditions; caused by any one or more of a variety of irritant factors; characterized by a varying degree of adenoid hypertrophy of the subepithelial lymphoid elements of the conjunctivae, of an essentially benign nature; manifesting but slight subjective symptoms or none at all, and invariably tending, after a longer or shorter period, to spontaneous and complete recovery. Strictly speaking, it is not a disease entity, but a symptom of various causative factors.

INCIDENCE.

It is found everywhere in varying degrees, and at some time, in at least 30 per cent of all children between the ages of 6 and 18

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 30, 1924.

years. It is not confined to school children as I have repeatedly seen it in children who never saw the inside of a school room. It is seen in the children of plutocrat and pauper, in children of all sorts and conditions. When large numbers of children are examined, as in the public schools, it is invariably found most frequently among those from 6 to 12 years of age, gradually diminishing in incidence as the older children are inspected, until when the age of 17 or 18 is reached, little or no folliculosis will be encountered. It is rarely seen in adults.

ETIOLOGY.

First and foremost is an essential predisposing factor, called, for want of a better term, the "lymphatic temperament" as evidenced by the presence of hypertrophied tonsils and adenoids, and other lymphatic tissues.

Given this, and the addition of any irritant factor in the eyes, whether it be physical, such as wind, smoke, dust, etc., or chemical, such as acids and alkalis in the atmosphere, or any one of a score of microorganisms, or, as is most frequently found, an error of refraction, and the follicles will appear. In other words, it is the reaction from a long continued irritant in many cases. The close relationship between folliculosis and the lymphatic diathesis has been noted by numerous observers. Some writers have gone so far as to speak of "eye-adenoids" and "conjunctival adenoids" in connection with this condition. It is a fact, however, that hypertrophied tonsils and adenoids are associated with follicular conjunctivitis in the majority of cases.

PATHOLOGY.

The pathology of folliculosis is simply and only in the hypertrophy of the sub-epithelial lymphoid elements of the conjunctivae. It is a true adenoid hypertrophy and is histologically indistinguishable from the adenoid hypertrophy of the nasopharynx. Subsequent infections may produce some hyperplasia of connective tissue, but not in true folliculosis.

SYMPTOMS.

Folliculosis, *per se*, is without subjective symptoms. When there is a marked refractive error, relief is sought for the accompanying asthenopia, and the folliculosis is discovered by the examiner. Again, an infection of the conjunctiva makes its appearance from any one of a dozen causes. The patient complains of a gritty sensation and rubs his eyes because they itch. Slight photophobia is noticed, and soon the eyes are red and a discharge is present, but these symptoms are due to an infection and may be spread all over a school room within a few days or weeks. Children with or without folliculosis are affected. In most cases, however, the condition is found following a routine examination of school children, and not because of any complaint upon the part of the individual affected.

Objectively, on eversion of the lids, masses of soft semitranslucent nodules are seen, usually in irregular rows, hemispherical in shape, from 0.5 to 3 mm. in diameter. The color ranges from an apparent anemia to a deep, dull red. The follicles are usually more numerous and larger on the lower lid, but the retrotarsal fold is often heavily involved. There is no evidence of cicatricial tissue and the cornea is never involved. There is never a sign of deep papillary hyperplasia of the mucosa. The tarsal surface is rarely involved. The condition may be unilateral or worse in one eye as compared to the other. There may be a slight ptosis due to the weight of the upper lid with its load of adenoid tissue. The above condition may persist for years without permanent harm to the patient, and eventually disappear without any treatment whatever.

The course of the disease is variable; it may clear up within a few weeks or it may persist for several years, whether treated or untreated, but the rule is recovery with complete restoration to normal regardless of how handled.

COMMUNICABILITY.

No unquestionable evidence has ever been introduced to prove that folliculosis is contagious. The fact that it appears in large numbers of school children is the sole argument offered in support of the theory. One might as well say that hypertrophied tonsils and adenoids are infectious for the same reason. Investigators have made repeated attempts to transfer the condition from one individual to another, and have invariably failed. A coincident infection in a case of folliculosis is, of course, transferable. And this is the reason it seems to so many observers to be communicable. They overlook the fact that the child so infected had folliculosis before he contracted the coincident infection.

An outstanding feature in the vast majority of cases of folliculosis is the presence of enlarged tonsils and adenoids. Next is the frequent presence of refractive errors and then a history of some low grade irritant in the child's environment.

DIAGNOSIS.

There is only one other condition that could possibly be mistaken for folliculosis, and that is the very early stage of trachoma.

In many such cases, individuals of the lymphatic type, it is impossible by any known clinical signs or laboratory tests to distinguish between the two conditions, and time alone can accomplish the diagnosis. When large numbers of cases are encountered, as in the examination of school children, there is no excuse for confusing the two conditions, because trachoma is not found by the hundreds of cases in this part of the country.

TREATMENT.

Coincident infections are handled in the usual way, refractive errors corrected, hypertrophied tonsils and adenoids removed. The beneficial effects of this last procedure are sometimes astonishing. Nature, unaided, will eventually bring about a cure, but when the patient shows symptoms that demand attention, mild astringents, such as glycerite of tannin, zinc sulphate, and boric acid are useful. Cases in which follicles exist without causing any annoyance to the patient should be let alone.

In conclusion, I wish to say that my knowledge of this condition is not academic, but is based upon an observation and treatment of many hundreds of cases, both in private practice and in the Santa Rosa Clinic, at San Antonio.

THE RECTAL AND SURGICAL CLINICS OF ENGLAND.

BY

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DALLAS, TEXAS.

What is believed to have been the first official European visit of any special society of the United States took place in July, 1924, when the American Proctologic Society met jointly with the British Subsection on Proctology in London. The succeeding account essays to briefly describe the observations of the American fellows during the course of their visit.

THE ROYAL ACADEMY OF MEDICINE.

The splendid home of the London profession, at number 1, Wimpole street, built at an expense of £80,000, was the scene of the scientific program. The latter followed the English custom, which the visitors found to be admirable, in that no set "papers" were read, one subject being designated for each session, which was discussed by a number of members previously appointed, none of whom were permitted to overrun their time. The debate on the Operative Treatment of Rectal Cancer, opened by Mr. Lockhart-Mummery and Mr. Earnest Miles, was found especially interesting, as the local profession was almost evenly divided in its allegiance to the perineal excision plan of the St. Marks' Hospital group and the abdomino-perineal technique of Mr. Miles and his associates at the Cancer Hospital. The two presidents, Mr. Aslett Baldwin of the British Society, and Dr. Ralph Jackson of the American, occupied the Chair alternately.

THE ROYAL COLLEGE OF SURGEONS.

Few, perhaps, realize that less than 200 years have elapsed since surgery became an independent calling and that only since 1800, with the foundation of the Royal College, has the profession definitely arisen above the status of a trade in England. In 1540, the Company of Barbers was by Act of Charter united with the small fraternity of surgeons, at that time an independent, but itinerant trade, largely subsisting by attachment to the persons of the nobility. A hundred years previous, the attempt to unite physicians and surgeons had proven abortive, and surgery was destined to remain subservient to physic until the nineteenth century. It is an interesting fact that the modern British surgeon's title of "Mr." rather than "Dr." is worn as a proud reminder of the earlier ignominy of his "manual" calling. Under the United Company, a system of apprentice-education, examination, and post-graduate instruction was fostered, and the occupation advanced in ability, if not in caste. In 1745 the United Company dissolved its partnership, an event disastrous to the new Surgeons Company, which proved to be tactless and unbusinesslike, and which, after a short career of forty years, perished. The present Royal College, (the term used in its original sense, "a society of men possessing certain powers and rights") rose on the ruins of the latter in 1800.

Under the guidance of Mr. Beadle, the pathological curator, a day was spent inspecting the tremendous pathological and anatomical exhibits housed in the Royal College building. Especially impressive was the Army Medical Collection of 3,300 specimens, showing in regional arrangement every type of injury or disease observed in the World War. Lord Lister's original anatomical drawings and his surgical instruments formed an interesting exhibit, as did the collection of plaster models of reconstructive facial surgery, and the collection showing lesions of every known colonic infection.

ST. MARKS HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM.

The Original Address of this institution, issued in 1835, could properly be reissued at

the present date, as a brief extract therefrom will show:

"Human suffering, in whatever form it may appear, will always be an object of interest to the benevolent mind. It is a matter of deep lamentation that diseases of the severest kind, which secretly impair and undermine the constitution, and involve a degree of personal distress appalling to be contemplated, pass too often comparatively without regard, because they do not obtrude themselves upon the public notice.

There is only too good reason to believe that the afflicted poor, having in vain sought for relief, have abandoned themselves to the unprincipled empirics, who, after exhausting their scanty means, have consigned them, hopelessly, to a miserable existence or premature grave.

This institution claims the merit, not only of affording relief to the poorer members of the community, but it further confers the important and peculiar benefit of detecting latent and, if not discovered, fatal affections, and of administering (under the favor of Divine Providence) effectual alleviation, if not permanent cure."

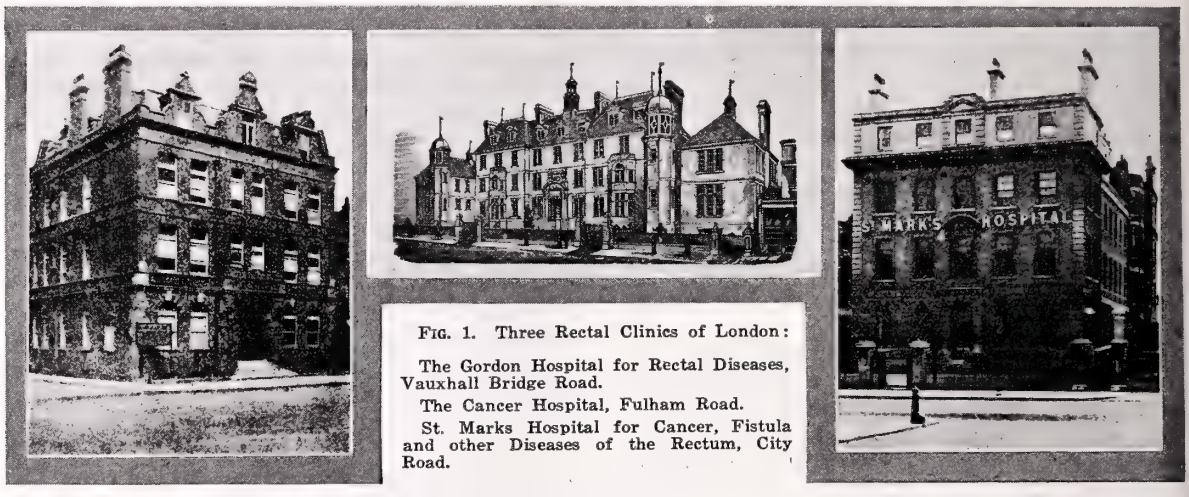

FIG. 1. Three Rectal Clinics of London:

The Gordon Hospital for Rectal Diseases, Vauxhall Bridge Road.

The Cancer Hospital, Fulham Road.

St. Marks Hospital for Cancer, Fistula and other Diseases of the Rectum, City Road.

For 89 years, this hospital, situated on the City Road of London, within a stone's throw of Wesley's Chapel has been the Mecca of the proctologist of every country, and within its walls the Allinghams, father and son, laid the foundations of the modern treatment of many rectal disorders.

Mr. P. Lockhart Mummery, together with Sir Charles Gordon Watson, and Mr. Graeme Anderson are the honorary surgeons at this time, and we witnessed the work of all. It may be remarked that there are, strictly speaking, no rectal specialists in England. These gentlemen are all general surgeons, with a special interest (and consequent skill) in the surgery of this region.

The ligature operation is favored for hemorrhoids, although we were here, as elsewhere, surprised to see either general or regional anesthesia used in preference to infiltration in minor rectal pathology. It might be mentioned also that carbolic injections are supported for uncomplicated internal piles by a number of British surgeons —Mr. Graeme Anderson having made an enthusiastic appeal in its favor at our general sessions.

Mr. Mummery, who was one of the earliest surgeons in England to perform the abdomino-perineal operation for cancer of the rectum, found it objectional as a routine procedure, chiefly because of its high mortality. He states that as most of the patients are old and often stout, it is both difficult and dangerous, although still used in St. Marks when the growth is situated high or extensive removal is indicated. His present plan is a two-stage operation, the first consisting of a very high "epigastric" colostomy to avoid subsequent strain, followed in one week by extensive perineal extirpation under spinal anesthesia (stovain). The peritoneum is opened from below after removal of the coccyx, and a generous portion of the sigmoid is removed along with the entire rectum and accessory muscles and fat. The bowel is closed and the perineal wound sutured without drainage. The pre-operative technique includes thorough cleansing of the bowel with lysol solution (used as a routine in this hospital) and in women, the use of a violet-green pack to sterilize the vagina. The staff now reports a series of 152 perineal extirpations of this type, with an operative mortality of 9.3 per cent, and with 47 per cent surviving after 5 years.

In this clinic, as in most others in England, the operators wore rubber boots, to avoid tetanus, to offset slippery floors, and for personal comfort.

THE CANCER HOSPITAL, FULHAM ROAD, LONDON.

Mr. Earnest Miles, the Chief Surgeon of this institution, has been an ardent advocate,

for some years, of the one-stage, abdominoperineal operation for all rectal malignancy, high or low, and we were fortunate enough to see his technique in a number of cases.

While the institution, which was founded in 1851, bears the designation "Free," the

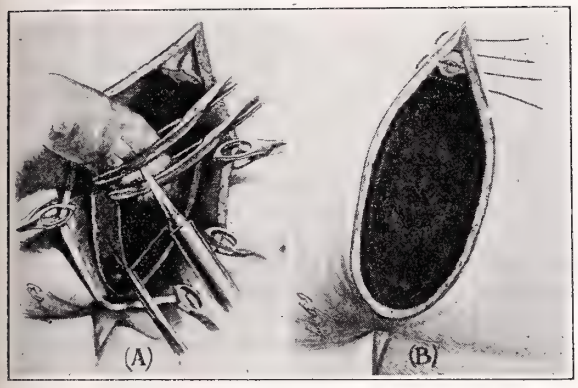

FIG. 2. Mummery's Complete Resection of Rectum from Below. A—Coccyx has been removed, fascia and levators divided, the rectum has been freed, and the peritoneal cavity opened. The mesorectum is tied off, and the bowel divided between clamps with the cautery. B—The end of the bowel has been closed and invaginated, and the peritoneum sewn around it. The skin wound is closed with mattress sutures, first intention healing being sought.—*(Diseases of Rectum and Colon Surgery—Mummery.)*

information has become rather gratuitous in modern England, where all hospitals, by a process of evolution not yet manifested in the States, are patronized exclusively by the poor; the nursing home, often a reconstructed dwelling house, serves those able to pay.

While the Cancer Hospital has perhaps the largest amount of radium in London, Mr. Miles expressed himself as pessimistic as to any cures in rectal or breast cancer from radiation. His own operative procedure is

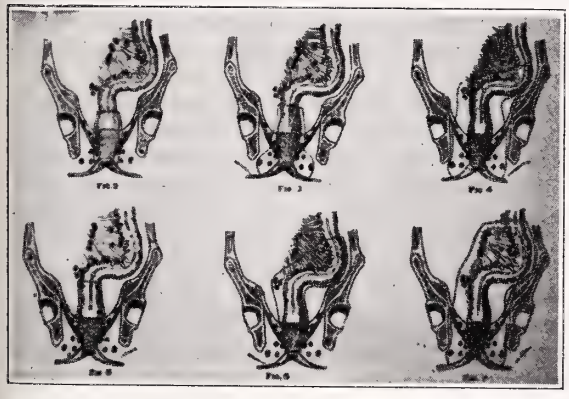

FIG. 3. Miles' Abdominoperineal Operation. Diagram illustrating Miles' contention that any other procedure (first five figures) fails to remove zone of upward spread.

based on a desire to remove not only what he terms the lateral and downward zones of spread, but the upward zone, including the pelvic mesocolon and glands—tissues which in his opinion correspond to the axilla in the breast operation. By increased speed, and by the substitution of regional anesthesia and nitrous oxide analgesia for ether, Mr. Miles has been able to reduce a mortality originally above 20 per cent to around 10 per cent, since the war.

In the cases we witnessed, caudal and spinal anesthesia were used jointly. Through a long abdominal incision the pelvic colon was clamped and divided with the cautery, the upper segment being brought through a separate colostomy opening, and opened without delay. The lower segment was dissected free expertly, with its mesocolon and glands, and placed in the lower pelvis, the peritoneum being closed above. The patient was then turned, and the entire lower bowel, perianal skin, ischiorectal fat, and the levatores ani muscles removed. The entire procedure required around fifty minutes. The perineal

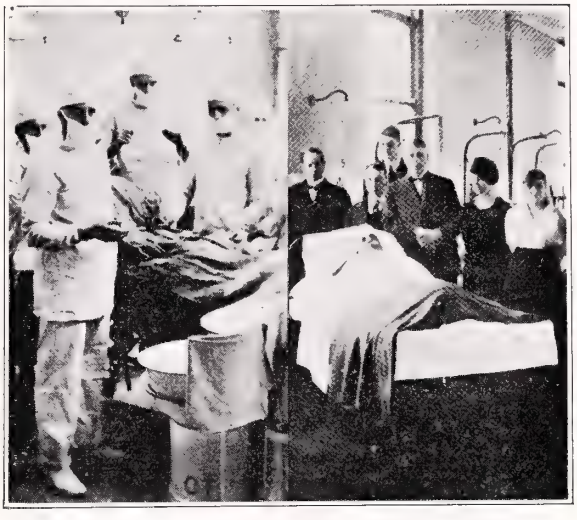

FIG. 4. Sir Berkeley Moynihan in the operating room and at the bedside.—*(British Journal of Surgery.)*

wound was drained, and irrigated daily with a 1 in 500 corrosive sublimate solution.

THE GORDON HOSPITAL, LONDON.

This institution was founded in 1884 for the exclusive treatment of rectal diseases, being named after General C. G. (Chinese) Gordon, hero of the campaigns in China and Egypt. It is located on the Vauxhall Bridge Road in Western London, is comparatively small, having only 38 beds, but its operating room seems constantly busy. The ligature operation for hemorrhoidectomies, seems to be favored here by the majority of the staff with the open excision of fistulae.

THE HEMPSTEAD GENERAL HOSPITAL, LONDON.

At this institution is located the clinic of Mr. George Waugh, whom we found to be an affable, skillful and enthusiastic surgeon. Upon two occasions we were privileged to see

his work, including a demonstration of his own technique in restoration of the right colon, also a partial resection of the stomach for an hour-glass contraction. His anesthesia in abdominal work consists of intercostal nerve infiltration, accompanied by gas analgesia. A long rectus incision is used as a routine, the muscle being retracted away from the midline.

His colon technique has been described in the British Journal of Surgery, and we found it most simple in demonstration, the prolapsed gut being placed in a prepared bed

FIG. 5. Sir Harold Stiles lecturing—a characteristic pose.—*(British Journal of Surgery.)*

in the right paracolic gutter. Mr. Waugh believes that many cases of supposed duodenal ulcer are ptotic individuals whose upper abdominal symptoms are due to traction, and whose food-relief results from the stimulation of the loaded segment of colon and its consequent unloading. He is hopeful that surgery of this reconstructive type will lead the profession to some extent away from its primitive limitations, permitting other activities than "amputation and drainage."

It is interesting to know that a number of surgeons in America (for example, Coffey, of Portland, and Small and Ainsworth, of Texas), are doing the same type of colonic work with considerable optimism.

THE MIDDLESEX HOSPITAL, LONDON.

This hospital, which is located on Mortimer street, just off High Hoburn, was founded in 1745 "to provide for the sick and lame patients of St. Giles and Soho." Originally 10 of its 24 beds were given over to "lying-in married women," it being stipulated that no "woman midwife be permitted to act as midwife at this hospital." History records that from 1793, for 21 years, the hospital provided refuge for 421 French exiles, expatriated by the Revolution.

The institution has now some 340 beds, and a medical school has beeon conducted in connection with the hospital since 1835. Sir Henry Morris and Sir John Bland-Sutton are the consulting surgeons, the latter recently a president of the British Royal College.

We were privileged to see Mr. Webb-Johnson and Mr. Gabriel operate; two amputations, a hemorrhoidectomy, and a colostomy for rectal carcinoma being scheduled. All the cases were done under general anesthesia; the piles were removed by the ligature method, and the colostomy was done through the left rectus muscle, with the technique known, in America, as that of Dr. Samuel Mixter.

THE ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE.

The comparatively short distance between the cities of England makes it possible to visit all its surgical centers with ease, Edinburgh requiring a rail journey of nine hours from London, Leeds only four, and Newcastle five.

Rutherford Morison was for many years Chief of the surgical staff of the Royal Victoria Infirmary, having retired in 1913. Surgical literature contains a wealth of contribution from his pen and genius (Bipp Paste for example, the Talma-Morison omentopexy, the oft quoted description of the activities of the "policeman of the abdomen," etc.) An elaborate bronze tablet in the surgical ampitheatre, modelled after that to Fenger in Cook County Hospital, bears tribute to the affectionate regard of his former house officers. Mr. Gray Turner and Mr. Hamilton Drummond arranged a splendid clinic for the visitors, and the writer was fortunate enough to see the former perform a number of operations, including a resection of a sigmoidal growth, a cleft palate operation and a cholecystectomy. The resection was done through a Morison muscle cutting

(transverse) incision, an end-to-end anastomosis being made, and the appendices epiploicae being tacked over the suture line.

Afterwards, Mr. Turner permitted us to inspect a series of previously operated cases, among them two ectopic bladders in which the Stiles technique had been used satisfactorily in transplanting the ureters; a case in which a huge megacolon had been removed, with recovery; and a carcinoma of the rectum which had been exised from below, thirteen years previously, and in which a perineal anus was functioning to the patient's satisfaction. A series of 43 cases of rectal cancer was demonstrated by lantern slides, the majority having been removed by the perineal route. Twelve were alive without recurrence after 5 years, and in addition, two had lived over 12 years from the time of operation.

THE GENERAL INFIRMARY, LEEDS.

The clinic of Sir Berkeley Moynihan is conducted in this 400-bed institution, which was founded in 1868; Sir Berkeley having spent 30 years in its service. Upon the day of our attendance, there was also present a group of some 20 of the younger British surgeons, a "travelling surgical society," who twice annually spend one week together in some Engglish or Continental clinic.

At this hospital two gastric ulcers were operated, a partial resection of the stomach being done in both cases. In the next case, a duodenal ulcer, a gastro-enterostomy was performed, coupled with a jejunostomy, which the operator stated would be kept open from 3 to 12 months, or until a radiograph demonstrated the complete healing of the ulcer. A case of this character operated one year before was demonstrated, the patient, a middle-aged female, having been fed through the intestinal opening during that period.

The next case was scheduled as a duodenal ulcer, but upon exploration a red, contracted, irritant stomach was seen, which Sir Berkeley termed a "Pyloric Blush" and which he believed to be a pathognomonic of appendiceal infection. The appendix, definitely diseased, was removed. In this connection, the operator remarked upon the frequent occurrence of hematemesis of appendiceal origin, stating that postmortem records at the London Hospital demonstrated that 80 per cent of deaths from or with hematemesis, showed appendiceal involvement rather than peptic ulcer. It was stated that in this clinic x-ray was regarded as diagnostic in gastric, but not in duodenal ulcer. In the latter, special emphasis was laid on the rising free acidity curve seen in the fractional test meal. All abdominal work was done under nitrous oxide only, and no retractors were used. While no time was lost, the operator stated that it required him "10 minutes longer to do a gastro-enterostomy than it did 10 years ago"—indicating his refusal to bow too abjectly to the god of speed.

After the operative clinic, a lantern-slide lecture on duodenal ulcer was given, and later, a "dry clinic" was conducted, in which a series of interesting cases were shown. One case, a polycythemia with a palpable spleen, had been kept under control for several years by the use of radium over the spleen. Two

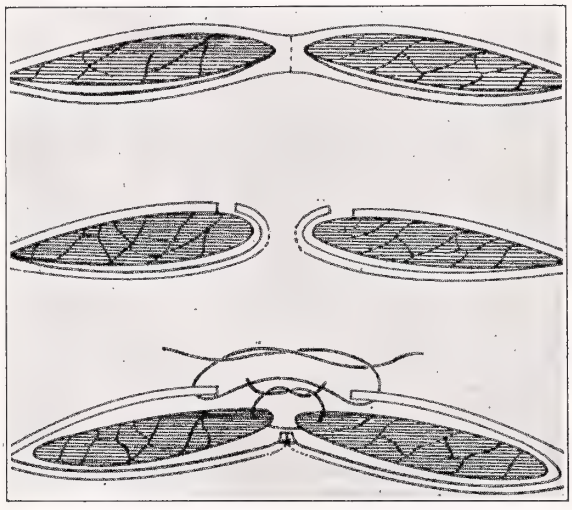

FIG. 6. Diagram illustrating Stiles' method of closing midline incisions (supraumbilical).

were cases in which the spleen had been removed, one for hemolytic jaundice and the other for a primary Hodgkins' disease of the spleen.

THE ROYAL INFIRMARY, EDINBURGH.

Sir Harold Stiles is now the chief surgeon of this institution, and we felt well repaid for the trip to his clinic. The hospital itself was instituted, in 1736, by George II., whose statue stands at the doorway, beneath the motto "Patet Omnibus"—which we understand makes the refusal of service, even to those able to pay, rather difficult.

Sir Harold (who is one of the few great surgeons with courage enough to dispense with the rubber glove) is, of course, the master anatomist of his profession, and to see him work is to have the dissecting room brought to the ampitheatre. In one case he removed a carcinoma of the tongue, the cervical glands having been previously dissected out; in another, he performed a block dissection of the neck for a similar lesion, using his J-shaped incision. The operator lectured constantly while working, the structures of the region being demonstrated in detail. A diseased gall-bladder was removed, a hard

rubber tube being used for drainage. In this case, the operation was made somewhat more difficult by the operator's preference for the midline incision, although his closure (illustrated by Fig. 6) appears to offer a very firm union.

ACUTE MIDDLE EAR INFECTIONS IN CHILDREN.*

BY

E. M. SYKES, M. D.,
SAN ANTONIO, TEXAS.

Children are much more susceptible to middle ear infections than adults. Von Troeltsch found inflammatory changes with gathering of secretion in nearly every postmortem done on infants of the first few years. Preysing investigated thoroughly one hundred postmortem examinations in children less than three years old. There were pathological changes in the middle ear in 81 per cent. In doing autopsies on children at St. Vincent's in Chicago, I was frequently surprised to find the middle ear full of pus, where no antemortem diagnosis of such had been made. The tympanic membranes had not ruptured and the general condition had disguised any symptom of an otitis media which could have been recognized only by an otoscopic examination.

In all general diseases, the ears may be involved, while the tendency of head colds, measles, scarlet fever, influenza, whooping cough and all upper respiratory diseases, to invade the middle ear, is well known.

The frequency of otitis media in infants is accounted for, according to Gomperz, by the following conditions:

1. The fact that the tubal ostia open into the nasopharynx.
2. The mechanics of birth cause circulatory changes, and therefore, a hyperemia and edema of the mucous membrane of the middle ear.
3. The foetal characteristics of the middle ear membrane which persist.
4. Immaturity of the new born.
5. Hereditary, constitutional diseases, such as scrofula, tuberculosis, syphilis, rachitis, offspring of alcoholics.
6. Traumatic injury of the middle ear before and during birth, entrance of ammiotic fluid and contained particles into the middle ear.
7. Coughing, sneezing, crying, vomiting in the course of infectious diseases, especially grippe, and less often influenza, measles, whooping cough, chicken pox, diphtheria, scarlet fever, etc., can introduce infection into the middle ear.
8. Haematogenous infections.
9. Gastrointestinal and brain affections can lead to infections of the middle ear because of vomiting.

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, May 1, 1924.

The other reasons which contribute to the prevalence of otitis media in infants, according to Alexander, are:

1. In the first weeks of life, the middle ear mucosa is rich and frequently there is mucus secretion present, both forming favorable culture media for invading micro-organisms.
2. The myxomatous tissue is especially abundant in the epitympanic space, which often favors an epitympanic suppuration which is not without danger.
3. In infants the epitympanum and upper part of the meso-tympanum are crossed by numerous bridges of connective tissue and mucosal septa. The mucosal folds are markedly thick and succulent while the antrum contains abundant mucosal tissue.
4. The eustachian tube in the new born is strikingly short and wide and the muscles are poorly developed.

The eustachian tube of an infant is 14 m.m. in length and horizontal in direction; while the adult tube is 33 m.m to 38 m.m. long and passes obliquely upwards and backwards to reach the tympanum at a higher level. The tympanic floor of the infant is slightly below the level of the nasal floor, while that of the adult is some 20 m.m. to 22 m.m. above the floor of the nose. The pharyngeal mouth of the infant canal is about the same level as the hard palate, while in the adult, it is about 10 m.m. above. It can be easily seen that the infantile tube has the physical characteristics which favor the entrance of germs and secretions from the nose and naso-pharynx.

The symptoms are much more variable than in the adult. In a child under three years of age, the symptoms may be so indefinite as to be of little or no diagnostic value to the practitioner. Pain in an infant is evidently not as keenly felt as in older children. There may be restlessness, sleeplessness, irritability, tossing during sleep, crying without apparent cause, grabbing at the ear or rubbing it during sleep or when awake. The head may be inclined toward the affected side, or when nursing the infant may show a preference to place the infected ear next to the mother. Most frequently, these symptoms are thought due to teething, indigestion, etc. Gastro-intestinal symptoms seen in infants, such as fever, vomiting, diarrhea, inability to digest food, may frequently lead the physician astray unless the ears are examined.

Fever as a symptom is very inconstant. The temperature may be anywhere from subnormal to 106° F., and may be continuous, remittent or intermittent. If there is sufficient drainage through the eustachian tube, the temperature may be very slightly elevated and the general symptoms mild. When the exudate gathers under pressure

and the tympanic membrane does not rupture, the fever will become very high and hard to reduce.

The general symptoms may vary from a very slight indisposition to a condition of high fever, fast pulse, convulsions, coma, vomiting and signs of meningeal irritation. These latter symptoms, while alarming, do not mean as much as they do in the adult. Nevertheless, it means pus under pressure in the middle ear, a state of affairs not to be considered lightly in view of the possible complications. The appearance of the membrane varies according to the duration of the process. The membrane of an infant is sometimes difficult to see; the membrane is almost horizontal and the auditory canal narrow, and inspection is made difficult by a struggling child. In the early stages, the membrane appears reddened with obliteration of markings, but with the accumulation of exudate, there is a decided bulging. Perforation may occur very rapidly or may never occur. In the cases where the pus drains into the naso-pharynx, the drum head sometimes loses its redness and acquires a dull, gray appearance with moderate bulging and loss of markings and reflexes. There is only one sure way to make a diagnosis and that is by canal inspection.

The prognosis is favorable in the great majority of cases, but the following complications may occur: (1) Subperiosteal abscess; (2) acute serous labyrinthitis; (3) acute diffuse suppurative labyrinthitis, which may lead to epidural abscess, cerebellar abscess and purulent leptomeningitis, and (4) infective sinus thrombosis, and direct infection of the jugular bulb.

The treatment is to create drainage either via the eustachian tube or through an opening through the tympanic membrane. In the early stage, very rarely seen by the consulting otologist, an abortive treatment may be used, that is, rest in bed, calomel, followed by a purgative, atropine, and mentholated drops in the nostrils. The idea is to reduce the salpingitis and swollen nasopharyngeal tissues so that drainage is created. This sometimes stops the progress of the inflammatory process and resolution to a normal condition occurs.

However, the tympanic membrane should be watched, and if there is any redness, bulging or obliteration of markings, do not hesitate to do a myringotomy, especially when there are symptoms of pressure or absorption of toxins. Various forms of treatment such as phenol and glycerin drops, warm applications, anodynes, fever mixtures, etc., may give relief, but an incision of the tympanic membrane is the procedure which will relieve the most intense symptoms almost immediately. The incision should be repeated if the opening heals more rapidly than the process in the middle ear and there is a return of constitutional symptoms.

Following the cessation of suppuration, it is highly important to observe the child weekly to see if conditions return to normal. Too often the acute inflammation is the beginning of a chronic process which, later in life, is manifested as a catarrhal deafness. The insidious way in which deafness will creep upon a child is well known to otologists. Therefore, the hearing should be tested regularly for some months afterwards to detect any encroachment on the auditory function. The nose and throat should be freed of all infections and obstructions, as enlarged and diseased tonsils and adenoids. Suppurating nasal sinuses, a condition very frequently overlooked in children, should be cleared up.

If the otitic suppuration does not cease in six weeks' time, attention to the nose and throat will frequently bring about a complete cure. If a child continues to have a discharging ear for several weeks and symptoms of intermittent fever, nystagmus, vomiting and semicoma occur, then apparently clear up only to recur in a day or so, there probably is an infection walled off in the attic or antrum. A mastoid operation becomes necessary to relieve the child of this dangerous condition.

CASE REPORTS.

Case No. 1.—J. T., one year old, had been ill with high fever and vomiting, and had been in a semicomatose condition for several days. The consultants called in diagnosed the case as grippe, spinal meningitis, tubercular meningitis, etc. An otological examination showed the tympanic membranes to be of a dull, grayish-white color, with markings absent and slightly bulging. A double myringotomy was followed by a purulent drainage and all alarming meningeal symptoms completely cleared up in 24 hours.

Case No. 2.—A girl, aged two years, had been suffering for one week from high fever, delirium, headache and was semicomatose at times. An examination showed the tympanum of the right ear to be bulging and of a grayish, red color. The veins in the right eye were congested—a peculiar symptom, and also a worrisome one. A myringotomy extending into the epitympanic space gave complete relief for two days. The symptoms began to return, so another high myringotomy was done and cold applications were applied to the right mastoid region. The ear discharged freely and the patient made an uneventful recovery, without further operative measures.

Case No. 3.—A child nine months old had been referred from some small town as a gastro-intestinal case. The child had been sick for six weeks, suffering from high fever, diarrhea, cachexia, vomiting. It had not responded to any method of feeding and was almost in extremis when seen. An ear examination revealed the tympanum of both

ears to be of a dull, grayish-white color, with loss of markings and slightly bulging. A double myringotomy turned the tide, for the febrile and gastro-intestinal symptoms cleared up in a few days and the child recovered from what seemed a hopeless condition.

Case No. 4.—A girl, three years of age, had contracted cold four weeks previous to examination, followed by earache in both ears, high fever, headache and delirium which had been going on for three weeks. The tympanic membranes were red and bulging. Radiograms showed the region of the antrum to be cloudy in the right ear. High myringotomy followed by cold compresses to the mastoid, relieved the symptoms for a week, when fever and delirium returned. A high myringotomy, followed by an increase in purulent discharge relieved the symptoms permanently.

Case No. 5.—A child, two years of age, had been referred from a neighboring town for treatment of the stomach and intestines. A previous otological examination had been made and the parents were told the ears were not at fault. The child was suffering from fever at times high, restlessness and gastro-intestinal symptoms. From the history of the case, the attending physician requested another otological examination. The membranae tympani were dull gray in color, slightly retracted and the markings were absent. Nevertheless, both membranes were incised and pus flowed out, giving complete relief of the symptoms in a few days.

Case No. 6.—A girl eighteen months old had been suffering from anorexia, intermittent fever and gastro-intestinal symptoms for six weeks. The case had been in the hands of physicians in a smaller town, but the ears had not been suspected of causing trouble. An otological examination revealed a double middle-ear infection. Incision of the ear-drums and the usual after-treatment cleared up the symptoms and also undoubtedly helped a coexistent pyelitis to disappear.

Case No. 7.—A boy, aged 2½ years, had been suffering for six weeks from fever and diarrhea and finally from intense headaches, flaccid pseudo-paralysis of the left leg and right arm. His general condition was serious. Several myringotomies of the left ear brought forth only a little bloody fluid, no continuous profuse discharge followed. An *x*-ray of the mastoids was apparently negative. There was no swelling or tenderness over the mastoid. Nevertheless, following the only lead, the otitis-media—the mastoid on the left side was opened. The cells were broken down and an abscess was found pressing on the internal plate of the skull. From that time on, the child made a very rapid recovery with no untoward sequelae.

CONCLUSIONS.

1. Every infant or young child suffering with pyrexia, should have the ears examined.

2. A routine examination of children's ears in infectious diseases would probably save much pain, annoyance, anxiety and possibly some lives.

3. Myringotomy, a comparatively safe surgical procedure in the hands of one accustomed to doing ear work, is the elective treatment for all cases of suppurative otitis media.

ABSTRACT OF DISCUSSION.

Dr. W. R. Thompson, Fort Worth: I am thoroughly convinced conservatism should be practiced in doing paracentesis. Ten years ago I felt it necessary to operate much oftener than now.

During the past winter I was called to see the son of a special friend, a physician. This little boy had been having fever for several days. The family physician said he could see no excuse for the fever and felt sure it was caused by infection in the middle ear. I was sent for to open the drum membrane, but I did not advise it. The next day I was called again and met the attending physician who insisted upon a paracentesis, but I could see no reason for it and again advised the contrary. The next day the fever was slightly less and recovery took place without subjecting the child to the dangers of middle ear infection which most likely would have taken place following a paracentesis.

I do not feel that one is justified in opening the drum membrane in any case, unless he has more than ordinary skill in determining the necessity for such a procedure.

Dr. O. S. Hodges, Beaumont: Recently we have had quite an epidemic of scarlet fever. I saw about 15 cases without any ear complications. In our measles epidemic there were very few acute suppurative otitis medias. Almost all of the cases I saw this year were from lagrippe.

Dr. Bertha S. McDavitt, Temple: I want to speak in favor of suction in treating otitis media. We are accustomed to the use of the Coffin suction apparatus on a very badly running ear. Within three days the pus clears up in many of these cases.

Dr. J. J. Richardson, Fort Worth: In a good many cases the ear-drum looks apparently normal until the baby cries. Every time it struggles, the drum will bulge. If you look at it while the baby is crying, you might be tempted to open the drum. Probably many drums are opened which are not diseased.

Dr. O. M. Marchman, Dallas: With regard to disseminating knowledge to the general practitioner, many of these cases are far advanced before we see them. We do not have adequate light in examining these cases in the patient's home unless we go prepared with our own equipment. I never use a sharp-pointed knife, such as a cataract knife. I use one which has a round point. I have seen Whiting and Dench present cases in which sharp-pointed knives have been used to make an incision in the upper quadrant, as a result of which the foot-plate of the stapes was disturbed, followed by dizziness and deafness, and sometimes death.

Dr. J. J. Hanna, Quanah: I want to report the case of a baby 9 months old. Following measles, his ear was bleeding. I applied an ice pack, packed the ear with gauze and gave thromboplastin. When I took the packing out I was surprised to have a gush of blood. For several minutes I thought possibly the carotid artery had ruptured. However, the bleeding soon ceased and was followed by a serosanguinous discharge which lasted for several days and then finally cleared up.

Dr. M. L. Martin, Denton: During last winter we had severe epidemics of measles and mumps and croup, with very few middle ear infections. I attribute this to the fact that the family physician has gotten in the habit of taking better care of the nose and throat during these attacks. It has been preached to them that they will have fewer attacks of middle ear trouble if a suitable spray is used and most of them are doing this. They

are attempting to keep the nasal passages as clean as possible.

Dr. C. P. Schenck, Fort Worth: Otitis media has been very prevalent in my practice this spring, following the measles epidemic especially and, to some extent, subsequent to influenza. However, practically all of the cases have responded to appropriate treatment. One of the most helpful things in my hands has been the application of a moderate degree of suction. This not only mechanically removes the middle ear secretion through the perforation but it produces a hyperemia and a local leukocytosis and helps combat the invading organisms.

Dr. Louis Daily, Houston: When should we open an ear drum? This question is usually answered by the pediatrician's demand. There are, no doubt, many early cases of otitis media which clear up without paracentesis; and again one encounters cases of almost normal looking drums, the paracentesis of which clears up an infant's temperature. It is largely a question of judgment based on experience, and of coöperation with the pediatrist.

Dr. Sidney Israel, Houston: The treatment which some physicians prescribe for children in the presence of an acute coryza or rhinitis, namely, argyrol drops in the nose, may not be wise. We have seen several cases in which acute otitis media followed shortly after the instillation in the nostrils of drugs, such as argyrol. I am, therefore, of the opinion that this form of treatment of young children should be abandoned in the presence of nasal and postnasal affections, for the reason that the amount of good to be accomplished is far less than the complications that may arise by this form of therapy.

Dr. Sykes (closing): The otologist should heed the demand of the pediatrician when it comes to opening the tympanic membrane. It is very gratifying to every one concerned to have persistent pyrexia solved by a myringotomy. Any watery solution placed in the nose is apt to carry infection from the naso-pharynx to the ear via the eustachian tube. The suction method is used regularly in my treatment of purulent otitis-media, and no doubt helps to clear up a persistent discharge. A study of the different epidemics will help to determine whether we should open an ear early or not. If it is known that a strain of pneumococci or streptococci is epidemic and is causing a number of mastoid infections, we should not hesitate to do an early myringotomy.

MUNICIPAL WATER SUPPLIES.*

BY

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In general, water supplies may be classified, according to use, as: (1) Domestic, (2) industrial, (3) public, (4) agricultural irrigation, and (5) power. Domestic water is that used for drinking, cooking, washing, lawn sprinkling, etc.; industrial water, for manufacturing and other mechanical purposes; public water, for extinguishment of fires, street washing, sewer flushing, etc. Agricultural irrigation water and power water are beyond the scope of this paper.

Modern municipal supplies usually—and should always—provide abundant good water for domestic, industrial, and public uses. One source of supply, one pumping station, one set of mains, and one elevated tank, reservoir, or standpipe, generally constitute a municipal water system adequate for the demands of all three uses. Occasionally, as in Fort Worth, additional separate sources of supply, pumps and pipes are provided for augmenting fire protection service in congested business districts. Such dual systems are rare. Sources of supply are varied, but may be classified under two heads, "Underground" and "Surface;" the former comprising springs and wells of all sorts, the latter rivers, natural lakes, and waters stored behind dams.

Throughout the country, and in Texas, many cities and towns derive their supplies from underground sources, but the large majority of our people are supplied with surface water, quite generally filtered and frequently softened, by modern methods. There is a popular notion, tradition almost, that well water, more particularly artesian, or deep well water, is, in the very nature of things, pure and wholesome. "Pure spring water" is a pat phrase.

Quite frequently, wells are drilled or dug into water-bearing sands which furnish (bacteriologically speaking) pure water indefinitely as do many springs, but that is by no means universally true. Wells of all sorts, and natural springs, far outside the polluting effects of civilization, give potable water, but once a population with its bodily wastes occupies the territory, pollution commences. "Dug" wells of hamlets and villages are contaminated by the washings and leachings of privies, that penetrate their curbs. Pervious soils and underlying sand and gravel strata carry leachings to artesian and deep drilled wells. (The distinction between artesian and deep drilled wells is that the one flows; the other, perhaps equally deep, doesn't.)

The pollution of wells and springs in a settled country is a serious and increasing menace to public health. Every underground source of municipal water supply should be looked upon with "scientific suspicion;" should be deemed guilty until proven innocent. Quite recently, a noted artesian supply for a large section of a Texas city was found to have a total count of about 2,000 bacteria per c. c. with positive B. coli in 1 c. c. of every sample examined. For many years this water was wholly safe, but is now contaminated by the dense population surrounding the wells, which are 1,000 feet deep. This case is almost typical.

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 30, 1924.

Underground supplies usually carry a varying content of mineral salts, some harmless, some unwholesome and otherwise objectionable, especially the carbonates and sulphates of calcium and magnesium. Again, underground supplies, bountiful when first tapped, quite generally diminish with the years, due to interference of nearby wells, interstitial friction, sand-clogging and occult causes not yet fully apprehended by investigators. Many Texas cities and towns, once adequately supplied by artesian or deep wells, have been forced to abandon them, in part or entirely, and to seek surface water as their principal source of supply.

Some underground waters are better than others. Unless flowing to the surface, they are more or less costly to secure; they are undependable in quantity, and increasingly open to suspicion in potability—a rather gloomy picture. However, communities must have water, and dug or drilled wells are frequently the only sources of supply available to the community purse. Location of these should be made only after a careful study of the possibilities of early or future contamination, and with curbs or casings so designed and constructed as to shut out wash or leachings. From time to time, preferably every 30 days, samples of the water (collected and forwarded as prescribed by their regulations) should be sent to the State Board of Health for examination. Should pollution become evident, that department will gladly assist in discovering its cause and advise methods for its correction.

About 500 Texas communities are supplied with water through water works, municipal, private, or institutional. (V. M. Ehlers.) These works furnish water to nearly half the population of the State. There are 80 surface supplies, 60 of which are either equipped with modern filtration plants, or with settling tanks of some type; 20 are chlorinated, and the remainder serve water "raw." More than 400 plants serve underground water, about 40 of which chlorinate the water at the pumping station. While underground supplies are far greater in number than surface supplies, more people are served with surface water than with well water.

All surface waters are contaminated to some degree by human and other animal wastes, and all are media for the growth of many of the 25,000 varieties of algae and other "plankton," animal and vegetable. The latter organisms, while not intrinsically harmful, on decomposition impart, by their essential oils, disagreeable tastes and odors to the supply, particularly when chlorine is used as a sterilizer. All vegetable plankton, algae and allied, can be eliminated by minute doses of copper sulphate. Something like one-half part per million of this salt (four pounds per million gallons,) will serve the purpose, without harm to humans or fish.

Attention has already been called to the general unreliability of underground waters. Surface waters are more unreliable, since pollution by human and animal wastes is more direct than in the case of wells. No surface water, unless from an utterly uninhabited drainage area, should be used as a municipal supply without purification by modern methods. There is a saying that "running water purifies itself in sixteen miles." This, like the traditions concerning wells and springs, is generally far from the truth. All natural surface waters contain dissolved oxygen, the content varying with temperature and many other conditions. Nearly all water-borne pathogenic bacteria are anaërobes, killed by oxygen. The purling brook, rippling and babbling over stones and gravel, takes on an oxygen content that in large measure eliminates such bacteria. Great rivers, broad, deep, and slow-moving, take on proportionately less oxygen, and are less active in self purification.

In general, sanitary engineers have about agreed that not more than one part of ordinary domestic sewage should be permitted to discharge into one hundred parts of running water; *e. g.*, if a million gallons per day of ordinary municipal sewage is to be discharged into a stream, the flow of such a stream should be at least one hundred million gallons per day, if putrescence is to be avoided. Even vastly smaller ratios of sewage would be hazardous if the stream, perhaps scores of miles below, is to be utilized for municipal purposes.

No safe fixed rule for the number of miles needed for "self purification" of streams has been determined. No sewage should be discharged into any stream which in its not far distant lower courses, is furnishing water for human consumption. If sewage must, however, thus enter such a stream, it should first be clarified, oxygenated and sterilized by the most efficient modern processes. Even then, the idea of victualling a community with bodily wastes, no matter how dilute, is abhorrent to every concept of sanitation, decency, and good taste.

A large majority of the rivers and creeks of Texas are inconstant, of varying discharge volume, whether annual, monthly, or daily, maximum, minimum, or mean. If these are to be depended upon as sources of municipal supply, their flood waters must be

dammed, impounded, and stored, for use in dry seasons.

Engineers are gradually perfecting methods of dam and spillway construction and are hoping for legislation that will better protect drainage areas and reservoir lakes from pollution. Our best endeavors to secure clean watersheds and shores will however, in nearly all cases, fall short of rendering surface supplies fully safe for human consumption. Natural sedimentation in a lake of large capacity will greatly reduce the bacterial count, and the life of the typhoid-dysentery group in ordinary lake water, is brief—at its longest, probably 30 days.

After such a lake has ceased to discharge flood water over its spillway, its quiet waters conduce to progressive sedimentation. The comparatively small inflow at its upstream end will bear, for instance, 1,000 total count, with positive B. coli thirty days after the flood; at the lower end, near the dam, there is probably but 100 total count, and only occasional positive B. coli. If the latter bacterial content could be assured, chlorination alone might render the water safe for use, but "wind and wave" make such certainty improbable. If wholly safe water is to be had, it must be coagulated, settled after coagulation, and the supernatent layers filtered and (perhaps) also sterilized by chlorine or "bleach," the former being now in general use for the purpose. (It should be understood that liquid chlorine, or the chlorine derived from calcium hypochlorite is merely the necessary intermediate reagent for generating nascent oxygen, the real germicide.)

All surface water supplies are polluted to greater or less degree, and should be purified before service for domestic use. For the past 20 years "rapid sand" filtration has been the accepted practice. (Rapid sand filtration plants are in use at Dallas, Fort Worth, Waco, Paris, Denison, Breckenridge, and many other Texas cities.) Formerly water was filtered through "slow sand" beds of great area, the rate of filtration being 2,000,000 to 3,000,000 gallons per acre per 24 hours; the rate of filtration through "rapid sand" filters is approximately 125,000,000 gallons per acre per 24 hours, with less capital investment, only slightly higher cost of operation, better purification and greater dependability.

The raw water is first "strained" through bars or coarse screens to prevent the entrance of fish, twigs, leaves, etc., and then flows to a suitable point for dosing with a coagulant, usually aluminum sulphate, commercial alum. This alum, in average amounts of 1 grain to the gallon of raw water, is dosed either in dry powdered form by suitable machinery, or in solution through a standardized "orifice box." It is highly soluble, but upon contact with the carbonates and bicarbonates of lime and magnesium in the raw water, becomes changed to aluminum hydrate, the "coagulum" or "floc" that is to bring about rapid sedimentation of turbidity and bacterial content, and that, in part, laden with bacteria and fine particles of earthy matter, will later be caught and held by the sand beds of the filter. Should the raw water bear too small a lime content, enough lime must be added to insure the reaction. This is rarely necessary.

Immediately after receiving this minute dose of alum (or perhaps iron sulphate and lime) the raw water is gently agitated by flow through labyrinthine open channels or other devices, to insure complete reactions, and conducted into a deep, capacious sedimentation basin through which it flows at an imperceptible rate, say 40 feet per hour, emerging at the far end minus about two-thirds of its turbidity and bacteria, which have settled out during the 4 to 6-hour journey. At suitable intervals the sedimentation basin must be drained and the accumulated "sludge" of mud and bacteria washed out to the sewers. For this reason the plant must be provided with duplicate basins, one of which must do double duty during the brief washing period.

Upon its exit from the sedimentation basin the "settled water" flows to the filter beds. These are usually equipped with about 30 inches of carefully graded sand, supported by about 18 inches of graded gravel—the finest on top, the coarsest at the bottom of the bed. Underneath the gravel lie perforated pipes to collect the filtered water on the one hand and convey "wash water" during the renovation process, on the other. The settled water filters through the sand and gravel to the collector pipes at the rate of about two gallons per minute per square foot of sand surface, practically all the remaining "floc" with their burden of mud and germs being caught and held by the surface and upper few inches of the sand.

In the course of hours, or days, varying with the turbidity of the raw water, the sandbeds become clogged at and near the surface and must be renovated, or, in filter parlance, "washed." The perforated collector pipes underlying the gravel serve also to introduce filtered "wash-water" under moderate pressure. After suspending filtration operations for the moment, the filter beds, one at a time, are partially emptied of water, and filtered "wash-water," is forced up from the bottom through the

gravel and sand, at suitable rate, several times the filtration rate, greatly agitating the sand and carrying off all the accumulated mud and bacteria to the sewer. No filter sand is carried away if the rate of wash is properly regulated. Ten to fifteen minutes suffice for the washing process, when the bed is restored to service. About 4 per cent of the output of a filtration plant must be devoted to washing its beds. This is either taken from the mains, through "regulating valves" or from a special "wash-water tank" slowly filled from the mains between washings.

All these processes are very simple and effective, but the various dosers, regulators, indicators, and combinations of pipes and valves are rather complex and intricate. After reaching the collector pipes on the floor of the filter beds, the filtered water flows to an underground reservoir, commonly called the "clear well," from which it is pumped to the city mains. Although the processes just described should result in a water utterly free of turbidity, and with a bacterial count well within the limits of safety (20 total, and negative B. coli), still, as in all other affairs mundane, the human equation and the "chapter of accidents" must be hedged. To this end every modern filter plant is equipped with apparatus for injecting a minute dose of liquid chlorine just prior to pumping the water into the city mains. As indicated above, nascent oxygen is the true germicide, the reactions being as follows: $H_2O+2Cl=HCl+HOCl$, and $2HOCl=2HCl+O_2$.

Many surface waters bear considerable quantities of the carbonates, bicarbonates and sulphates of lime and magnesium. If such mineral content exceeds say 100 parts per million, or 6 grains per gallon, the filtration plant should be equipped with apparatus for dosing with quicklime or hydrated lime to precipitate the carbonates and bicarbonates, and soda ash to throw down the sulphates. The additional apparatus costs comparatively little and occupies but small floor area.

In round numbers, the cost of filtering municipal water supplies, including labor and chemicals is about 1½ cents per thousand gallons; and of softening it, from 1 cent per thousand gallons to some higher figure, varying with the hardness of the raw water. The average family uses about 5,000 gallons of water per month. To them the difference in cost between unfiltered polluted water and filtered safe water, would be 7½ cents per month, or 90 cents per year. Should the water be partially softened as well, the yearly additional cost would be about $1.20, but the resulting saving in soap would probably be three times that sum. Softening water at a municipal plant is also a great boon to all steam operated industries, saving the cost of "scale" removal in boilers, and increasing fuel efficiency far beyond the cost of softening.

GOITRE REDUCED BY WATER TREATMENT.

"One of the most important developments in modern water purification is the probable treatment of the water for the prevention of simple goitre. For a long time it has been known that there are certain districts where there is considerably more goitre than in others. There are four noted districts where this disease is very prevalent. They are as follows: (1) The Alpine mountain region of Southern Europe, which includes all of Switzerland, Northern France, Northern Italy, and the Balkan States; (2) the Himalayan mountain region of Eastern and Southern Asia; (3) the Andes mountain region of South America, and (4) the Great Lakes Basin of North America, the basin of the St. Lawrence River and the Pacific Northwest. It is said that there are some glacial sections of Southern Alaska, where all domestic animals have goitre. There is one location in British Columbia where it is difficult to raise calves, lambs and pigs on this account.

"Goitre is especially prevalent in Ohio, Indiana and Illinois, and around Portland, Oregon. In the vicinity of Detroit, Michigan, and Rochester, New York, seven out of every 100 school children are afflicted. This is very serious, since medical science has shown that there is a distinct relation between goitre and idiocy, marked by physical deformity and degeneracy.[1, 2]

"For some time the view was held that the hardness of the water, especially the magnesium compounds, was the cause of this goitre. Removal of these compounds by softening, however, did not appear to diminish the trouble any. An analysis of the Portland, Oregon, water showed that it was a very soft water, only having a total solid content of 30 parts per million, or less than two grains per gallon. Consequently, the hardness of water theory could not be accepted and some other explanation was in order. It had been known by the Greeks that treatment with seaweed ashes was very beneficial in several cases. These ashes contain quite appreciable amounts of iodine in the form of sodium iodide. Therefore the trend of the studies now began to be toward the relationship of iodine to this disease.

"In 1909 to 1911, iodine was used by the Pennsylvania State Fish and Game Commission to prevent goitre in fish. In 1917, the first extensive test of iodine in relation to goitre was made by the state of Ohio at Akron. Tests were made on the school children of that city and the treatment consisted in administering three grains of sodium iodide daily in the drinking water for a period of two weeks each spring and fall. The treatment naturally was optional, no one being forced to take it unless a desire was shown to do so. A careful record was kept, and it was found that in a total of 5,000 girls taking the treatment, not one developed a goitre. Of those not taking the treatment it was found that 27.6 per cent subsequently developed goitre in some form. Of those already having goitre, 60 per cent were cured by the iodide.

1. Amer. Jour. Public Health, February, 1923, p. 81; June, 1923, p. 512.
2. Jour. A. M. A., March 3, 1923, vol. lxxx, No. 9, p. 600.

The result of this test was sent to Switzerland, and Switzerland has done much since then in reducing the incidence of goitre. There they use table salt containing a small quantity of sodium iodine, instead of putting it in the drinking water.

In the United States, one city, Rochester, New York, is already treating the water to prevent goitre. The amount of iodine proposed for use is two ten thousandths of a gram of iodine, in the form of sodium iodide, per gallon of water. This amounts to .52 lb. per million gallons. At a cost of $4.75 per lb. it would cost $2.47 per million gallons. Covering a period of 30 days, as recommended, it would amount to $74.10 per million gallons. Also Sault Ste. Marie, Michigan, is now treating the water with iodine.

"The result of this Rochester treatment has a very important significance to the water works profession, and its progress will be watched with interest and has a very important bearing on the future of water purification."—W. S. Mahlie.

COST OF MUNICIPAL WATER WORKS.

Materials of construction and skilled labor, in 1924, are again at almost the 1920 peak of the cost curve. Under these conditions, municipal water works, without filtration plants, are costing from about $25,000 to $30,000 per thousand population for the smaller cities and towns. Filtration plants, fully equipped, now cost from about $30,000 to $35,000 per million gallons per day of filter capacity. A city of 5,000 people should, therefore, expect to spend $125,000 to $150,000 on a water system without filtration, and say $18,000 to $20,000 additional, for a half-million gallon filtration plant. Such prices are about double those of 1914.

Filtration of municipal water supplies has greatly lowered the typhoid death rate in all cities where filter plants have been installed. In a typical case, the average typhoid death rate for five years prior to filtration, was 75 per 100,000 population. During the first nine years of filtration the average was 11, and for the last five years there has been an average of 4, with a minimum year of 2 typhoid deaths per 100,000 people. Further comment on the vital value of filtered water seems unnecessary.

ABSTRACT OF DISCUSSION.

V. M. Ehlers, Austin: This paper is most timely and covers the subject in a most creditable manner. Major Hawley advocates testing for the purity of the municipal supply. I wish to emphasize the importance of making periodical examinations of the water even though the source of supply is from deep wells, inasmuch as well water contamination is very frequently intermittent and is likely to occur most frequently when the water is secured from limestone strata.

I furthermore wish to stress the importance of protecting surface municipal supplies by safeguarding the water-shed and preventing promiscuous bathing, boating, hunting and fishing in the city drinking water supply. With the advent of the warm weather, we may again anticipate taste and odor troubles in surface supplies, which usually have their origin from algae. To overcome this trouble it is desirable to have the specimens of algae identified and the proper amount of algaecide (copper sulphate in solution) applied to the raw water. Dr. I. M. Lewis, Professor of Botany, University of Texas, has kindly consented to identify algae, provided the specimens are collected and sent to him. Major Hawley has very clearly developed the fact in his paper that a diagnosis of the water ills must be made before a treatment can intelligently be prescribed. Especially, do I wish to commend that portion of his paper which relates to the necessity of having an experienced filter plant operator in charge of the water purification plant.

R. E. Tarbett, El Paso: Mr. Hawley made reference to the Hazen's theorem. Following the knowledge that water supplies were often accountable for typhoid and other intestinal diseases, and with the substitution of a safe water supply for one that was polluted, it was observed by Mills and Reincke that with the reduction in typhoid deaths, there occurred a reduction in other deaths not necessarily associated with the question of polluted water. These observations were called by Professor Sedgwick, "The Mills-Reincke Phenomenon." Later studies along these same lines by Allen Hazen, showed that for a reduction of one typhoid death due to the substitution of a safe water supply for an unsafe one, there was a reduction of approximately three deaths from other causes and this was called "Hazen's Theorem," by Professor Sedgwick.

It is very probable that the use of a polluted water supply has a tendency to lower vital resistance and to increase the susceptibility to diseases that are in no way connected with polluted water, nor necessarily of bacterial origin. Hence any improvement in the safety of our water supplies will tend to decrease our death rate not only insofar as water borne diseases are concerned, but others as well.

Dr. W. W. Battle, Austin: If the electrification plants were sterilized afterwards, they would be fairly efficient, but the fact is they are not sterilized as often as they should be, and really become incubators instead of sterilization plants.

J. B. Hawley, (closing): The "Electrification Process" of water purification is correct in principle, and if carefully operated will efficiently purify and sterilize the water. The turbidity and bacteria are caught and aggregated by aluminum hydrate "floc," their mass being caught and held back by slightly porous "mats." The electrolytic production of floc is about 15 times more costly than dosing with plain alum, and no more efficient. The safest, least costly drinking water is afforded by a well designed and carefully operated rapid sand filter.

I wish to emphasize what Mr. Ehlers has said about the alleged "filter plants" that are being palmed off on small towns and cities by their promoters. The plants referred to are mere basins into which, after dosing with "water works alum," the raw water is run, and then allowed to settle for several hours, varying with its turbidity. The top layer of clear water is then pumped into the mains for use, (sometimes after being partially sterilized by chlorine.) Frequently, even for a continuous period of several days, these settling tanks produce safe potable water, followed later by an unsafe polluted effluent, doubtless resulting from wind action or convection. The health departments of several states have prohibited the use of these "pseudo filters," and no Texas City supporting an adequate health department and an engineer department, has installed them. In some cases these tanks, with adequate remodeling, may be used as the coagulation-sedimentation basins of a *real* filtration plant, by the addition of suitable sand filters.

Sulpharsphenamine-Squibb, 3 Gm. Ampules.—Each ampule contains sulpharsphenamine-Squibb (see New and Nonofficial Remedies, 1924, p. 58), 3 gm. E. R. Squibb & Sons, New York.

THE ANATOMY OF THE FEMALE PELVIC FLOOR RELATIVE TO LACERATION AND REPAIR.*

BY

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In attempting to present the anatomy of the female pelvic floor, I shall emphasize only those facts which have important bearings upon perineal lacerations and perineal repairs.

For descriptive purposes, the diamond-shaped pelvic outlet may be divided into two triangular areas by a transverse line drawn between the two ischial tuberosities. This line passes through the central point of the perineum, which lies midway between the posteriorly from the central point of the perineum, where it blends with the superficial transverse perinei muscles and with the external sphincter muscle of the anus. Its two halves pass forward one on each side of the vaginal orifice, covering the bulb of the vestibule and narrowing as they pass anteriorly, to be inserted into the sides and dorsal aspect of the clitoris. A few of its fibers gain insertion into the lower layer of the urogenital diaphragm, beneath the crus clitoridis.

The superficial transverse perinei muscles are very difficult to display in female subjects. They are pale-colored muscles arising from the medial aspects of the ischial rami, close to the tuberosities, and pass obliquely

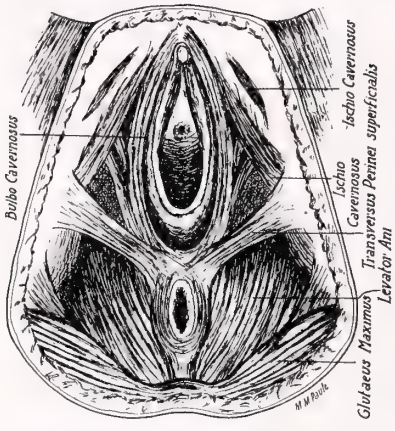


FIG. 1. Superficial Structures of Female Perineum.

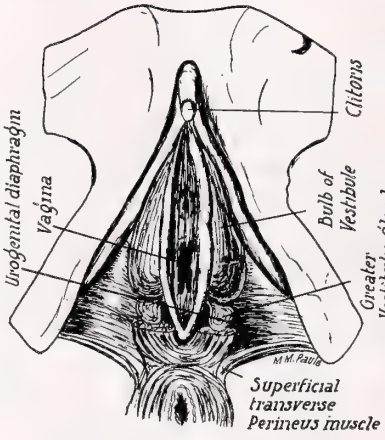


FIG. 2. Deeper Structures of Female Perineum.

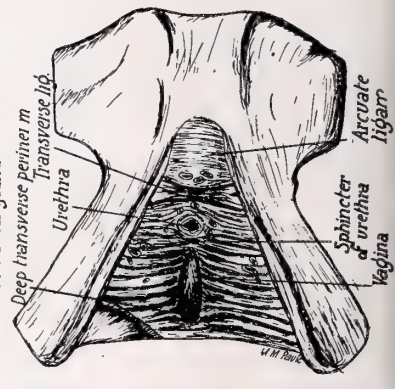


FIG. 3. Showing Deep Transverse Perinei Muscles.

posterior commissure of the vulva and the anal orifice. The triangle lying anterior to this line, and bounded laterally and anteriorly by the ischial and pubic rami and the pubes, respectively, is termed the urogenital triangle, because of its containing the external genitals and the external urethral orifice. The triangle lying posterior to the transverse line, and bounded laterally and posteriorly by the ischial tuberosities, the lower borders of the glutei maximi muscles, the sacrotuberous ligaments and the coccyx, in that order from before backwards is called the anal triangle, due to the fact that the anus is the important structure situated in that area.

If the superficial fascia, including Colles' fascia, be removed from the urogenital triangle, a number of muscles will be brought into view. Lying in the midline and practically surrounding the vaginal orifice, is the bulbocavernosus muscle (O. T. sphincter vaginae) (Fig. 1). This muscle takes origin medially to be inserted into the central point of the perineum (Fig. 1). It will be noted that these muscles mark the boundary between the urogenital and anal triangles. Another pair of superficial muscles, very insignificant and poorly developed in the female, are the ischiocavernosi muscles. Each of these muscles arises from the medial surface of the inferior ramus of the ischium, close to the tuberosity, and is inserted by an expansion on to the surface of the crus of the clitoris.

Surrounding the anal orifice is the external sphincter muscle of the anus. This muscle is really a continuation of the lower fibers of the levator ani muscle (Fig. 1). It is attached posteriorly to the tip of the coccyx by a pointed tendon, and it blends anteriorly with the other perineal muscles in the central point of the perineum. Some of its fibers are attached directly to the skin surrounding the anus.

The perineal body is the name given to the tissue lying in the central point of the perineum, where the perineal muscles blend with each other. It is composed of an in-

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924. From Department of Anatomy, Baylor University, Dallas, Texas.

definite mass of fibrous and muscular tissue. This body is often referred to by the obstetrician as the perineum. Perineal body is a more appropriate term for this mass of tissue.

When the superficial perineal muscles have been removed, the bulb of the vestibule will be displayed (Fig. 2). It consists of two oblong bodies, composed of erectile tissue, placed one on each side of the vestibule and entrance to the vagina. Each half is

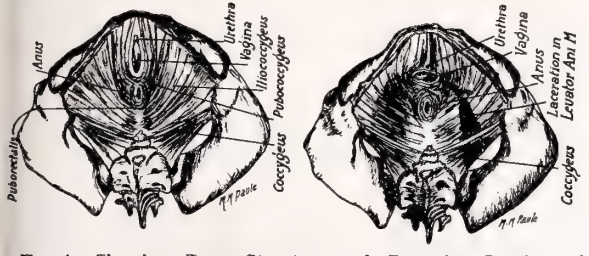


FIG. 4. Showing Deep Structures of Posterior Portion of Perineum.
FIG. 5. Showing Lacerations of Levator Ani Muscles.

invested by a fibrous capsule, which binds it to the surface of the inferior fascia of the urogenital diaphragm. The two halves unite in front of the vaginal orifice, and are continued forward as a plexus of veins to the clitoris. Thus it is seen from the description that the bulb is primarily a venous structure; and it may, therefore, become the source of annoying hemorrhage in perineal lacerations.

In a deeper dissection of the perineum, the urogenital diaphragm is brought into view. Owing to the greater width of the pubic arch, this membrane is seen to be more extensive in the female than in the male. However its strength is considerably lessened in the former, due to the fact that the vagina pierces it near its center. The diaphragm consists of an upper and a lower layer of fascia, enclosing between them a layer of muscle fibers, the sphincter muscle of the membranous urethra anteriorly, and the deep transverse perinei muscles posteriorly. The lower fascia of the urogenital diaphragm lies in the same morphological plane as the interosseous membranes found elsewhere in the body, and it may be looked upon as being similar in its development to those structures. It blends anteriorly with the upper layer of the urogenital diaphragm to form the transverse ligament of the pelvis; and the two become attached to the arcuate ligament of the pelvis, lying anterior to the transverse ligament. It blends posteriorly with the upper layer of the urogenital diaphragm and with Colles' fascia to enclose respectively the deep and superficial transverse perinei muscles. The lower layer of the urogenital diaphragm is attached laterally to the rami of the ischia and pubes.

The upper layer of the urogenital diaphragm is formed from the parietal layer of the pelvic fascia as this fascia reflects from the lower border of the obturator internus muscle, on the side wall of the pelvis to the midline in the urogenital triangle. On each side of the vagina it becomes continuous with the fascia on the under surface of the levator ani muscle, and around the anterior border of that muscle with the sheath of the vagina. The potential space thus enclosed between the two fascial layers of the urogenital diaphragm is known as the deep perineal pouch of the urogenital triangle in contradistinction to the superficial perineal pouch, which is that space between Colles' fascia below and anteriorly and the lower layer of the urogenital diaphragm above and posteriorly.

If the bulb of the vestibule and the lower layer of the urogenital diaphragm be removed as in Figure 3, a thin sheet of muscle fibers will be exposed, closely applied to the under surface of the upper layer of the urogenital diaphragm. The posterior portion of this muscular sheet is termed the deep transverse perinei muscles. They are poorly developed in the female. They are inserted into the central point of the per-

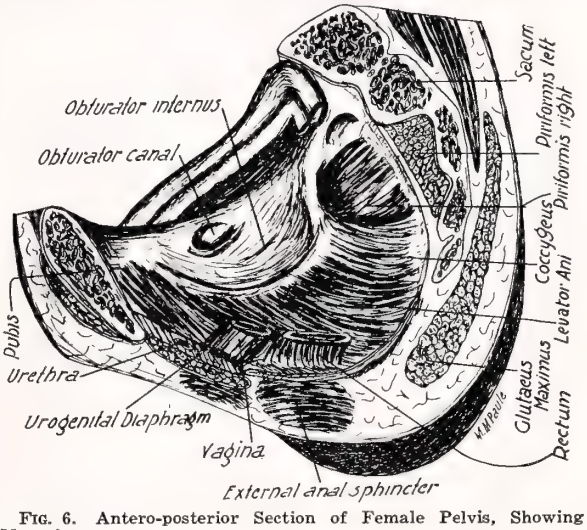


FIG. 6. Antero-posterior Section of Female Pelvis, Showing Musculature.

ineum. The anterior portion of this muscular sheet constitutes the sphincter muscle of the membranous urethra. This muscle consists of an internal layer of fibers arranged circularly around the urethra, and an external layer, which springs from the pubic arch, anterior to the origin of the deep transverse perinei muscles, and from the inferior fascia of the urogenital diaphragm. As the fibers of this layer approach the median plane, some pass in front of the vagina and urethra, while others are attached to the posterior wall of the vagina.

Thus it is seen that this muscle acts as a sphincter of both the urethra and the vagina.

If we now remove the remains of the urogenital diaphragm, the urogenital and anal triangles no longer exist as distinct entities, but become one continuous space, the deep perineal space. This area is separated

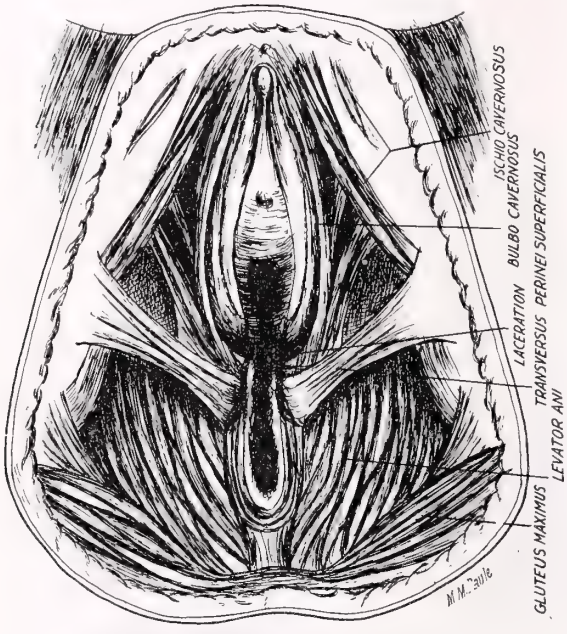


FIG. 7. Showing Laceration Through Perineal Body.

from the pelvis minor by the pelvic diaphragm. The latter is composed of the levatores ani and coccygei muscles, covered on their upper surfaces by the visceral pelvic fascia, and on their under surfaces by a fascial sheath derived from the parietal layer of the pelvic fascia covering the lower portion of the obturator internus muscle (Fig. 4).

The two levatores ani muscles are so disposed in the pelvis minor as to form a hammock-like support for the pelvic viscera. Their anterior inferior borders are partially separated from each other at three points for the passage of the urethra, the vagina, and the anal canal, in that order from before backwards. Each muscle has a triple origin. The anterior fibers arise from the back of the pubis, between the parietal and visceral layers of the pelvic fascia; the posterior fibers arise from the pelvic surface of the ischial spine; the intermediate fibers, constituting the greater part of the muscle, take origin in the angle between the visceral and parietal layers of the pelvic fascia (Fig. 4). The insertion of this muscle is rather complicated. The anterior fibers pass downward and backward, along the side of the vagina, to be inserted into the central point of the perineum, the anal canal, between the internal and external anal sphincters, and behind the anal canal and the lower part of the rectum. These fibers, therefore, serve to draw the anus and rectum forward and to compress the vagina against the pubes. The intermediate fibers sweep around the posterior surface of the lower end of the rectum, where they meet the fibers of the opposite side, and are inserted into the posterior wall of the gut, between the two sphincters. The posterior fibers pass backward and medially and are inserted into the median ano-coccygeal raphe, behind the rectum, and into the sides of the lower parts of the coccyx.

The two coccygei muscles are small, triangular sheets of muscle fibers which continue the plane of the pelvic diaphragm above and posteriorly. They fill in the spaces between the posterior borders of the ischial spines and the margins of the last piece of sacrum and the upper part of the coccyx.

As the pelvic fascia passes downward along the side wall of the pelvis, it splits along a line drawn from the back of the pubis to the ischial spine, into an upper or visceral layer and a lower or parietal layer. The former descends downward and medially on the upper surface of the levator ani muscle to the side wall of the vagina, at which point it divides into an ascending layer, which ensheaths the uterus and bladder, and a descending layer, which forms the sheaths for the vagina and the anal canal. The lower part of the rectum is separated from the posterior wall of the vagina by a transverse partition of fascia, which is known as the rectovaginal fascia. The bladder and urethra are also separated from the vagina by what may be called the vesicovaginal fascia (Fig. 6). The fascia on the under side of the levator ani muscle passes around the anterior border of that muscle to become continuous with the vaginal sheath.

Bearing in mind the foregoing description of the pelvic floor, we are in a position to appreciate the pathological conditions and inconveniences that may be wrought due to laceration of various portions of that structure. It is not the purpose of this paper to discuss all the numerous tears that may occur in the female pelvic floor, but only those that materially affect the musculature of the perineum.

Any tear of the pelvic floor which breaks the continuity of the muscular strata of that structure, irrespective of whether it may involve the lower or upper stratum or both, is bound to result in a lessened degree of support to the pelvic viscera. The amount of relaxation of the pelvic floor is in direct proportion to the depth of the tear. A tear

of the transverse perinei and bulbocavernosus muscles will result in an alteration of the position of the central point of the perineum, because the external sphincter of the anus will no longer be opposed in its action by these muscles; and, since the sphincter muscle is in a state of constant contraction, the central point of the perineum will be drawn backward, increasing the anterioposterior diameter of the vaginal outlet, and, at the same time, relaxing the outlet. This sort of tear may also extend up on the posterior wall of the vagina.

Restoration of the central supporting point of the perineum must be the purpose in the repair of such superficial tears, otherwise the original strength of the floor cannot be obtained. This may be accomplished by the approximation of the torn ends of the muscles plus their investing fascias. Merely suturing together the fascias and the mucous membrane does little toward strengthening the relaxed floor.

In the more complicated lacerations we find that the recto-vaginal partition has been destroyed. For example, the tear may begin at the posterior vaginal commissure and extend posteriorly and upward rupturing the central point of the perineum, the posterior wall of the vagina and its sheath, and separating the anterior portions of the external anal sphincter (Fig. 7). If the line of the tear be directed posteriorly, the levatores ani may escape, with the exception of their lower anterior fibers, since those fibers are inserted between the vagina and the rectum. Again, great damage has been done the perineal body, upon which the strength of the vaginal outlet depends. Incontinence of feces and varying amounts of prolapse of the pelvic viscera may be expected, depending upon the extent of the damage done.

In the foregoing type of tear the muscular connections with the central point of the perineum must be re-established. This may be accomplished by first suturing the tear in the anterior rectal wall, and then connecting the anterior ends of the sphincter ani muscle. Following this procedure the posterior vaginal wall and sheath must be closed, and the anterior fibers of the levatores ani, the transverse perinei, and the bulbocavernosus muscles reconnected to the central point of the perineum. All these muscles should be identified and sutured in their proper places. Merely passing the needle through the two sides of the perineum in hope of including the ends of the muscles in the suture may not give very gratifying results, because the ends of the muscles may be retracted far away from the proposed line of suture.

The laceration just described is probably much more infrequent than those that pass somewhat laterally and posteriorly from the posterior commissure. These tears may be forked, one limb passing on one side of the central body and one on the other side of that structure. Here we find that the bulbocavernosus, the perinei, and the levatores ani (levator vaginae) muscles have been separated from their connections with the central support on one or both sides. These muscles are now no longer able to oppose each other, and as a result, the pelvic support becomes materially weakened. There must be kept in mind similar principles to the ones described for central tears in the repair of such accidents, namely, the re-establishment of muscular connections with the central body.

Many varieties of tears may occur in the levatores ani muscles from the breaking of a few fibers to complete transverse severance of one of both muscles (Fig. 5). These tears may not be associated with marked demonstrable superficial tears. The breaks in the muscles may be interfascial, and can then be determined only by careful palpation of the pelvic diaphragm in an effort to determine marked relaxation of the muscles. The examination of the pelvic floor may have to be deferred until some time after delivery in order to give this structure ample time to renew its tone. Of course these injuries markedly weaken the support of the pelvic viscera, and are direct causative factors in the production of prolapses.

It is the contention of some that the posterior and anterior vaginal fascial sheaths are often torn transversely, high upon the vaginal walls, during the passage of the foetal head, resulting in the production of rectocele or cystocele, or both. The determination of such injuries may be accomplished by deep palpation on the posterior and anterior vaginal walls in an effort to ascertain any relaxation of these structures. To effect a cure of these accidents it becomes necessary, therefore, to repair the rents in these sheaths.

Although I have not undertaken a description of the blood supply of the perineum in the discussion of the anatomy of that structure, because such was not thought to be in the scope of this paper, yet a few words concerning the arterial and venous supply of the perineum in relation to infections and healing of that structure might not be irrelevant to the subject under discussion. As you all know, the blood supply of the pelvic structures is fairly complete, those organs in the pelvis proper receiving their blood from the abdominal aorta and from the visceral branches of the hypogastric arteries,

and the perineum proper being supplied by the internal pudendal artery from the hypogastric artery. The anastamoses, through the pelvic diaphragm, between these two sets of arteries are fairly complete. The veins of the pelvis and perineum are very numerous, and many of them are sinusoid in character. They empty into both the systemic and portal venous systems—the majority into the former. Therefore it follows that, if care be exercised against infection during delivery and repair of injuries to the perineum, we may expect rapid healing of the repaired structures. If, on the other hand, strict cleanliness be not adhered to during the pre- and postpartum stages of delivery, infective agents that have been introduced have a rich field in which to propagate, resulting in infected thrombi of the veins and in probably more serious complications. Under such conditions repair is practically useless, and often harmful, because infected tissues do not heal.

Finally, let it be remembered that any perineal tear involving muscular tissue may result in more or less permanent injury, regardless of the care that may have been exercised in reconnecting the ends of the torn muscles; because, when a muscle is torn transversely, the nerve supply to that muscle is necessarily interfered with, and the proper innervation may never be completely reestablished.

Let it also be remembered that muscles heal, not by regeneration of the muscular tissue, but by the formation of connective tissue between the torn ends, which interferes materially with the contractile power of a given muscle.

ABSTRACT OF DISCUSSION.

Dr. Willard R. Cooke, Galveston: Dr. Looney's drawings are excellent, and give a splendid idea of the details of the structure of the pelvic floor. He has brought out many anatomical points which are not generally recognized, and to some of which I am not able to subscribe at the present time.

In the repair of the injuries to the perineum, both recent and healed, we follow the technique of the late Dr. Lee. Dr. Lee was greatly opposed to episiotomy. In the last year or two of his life he began to follow in a modified way the principle of ironing out the perineum, as suggested by Potter. I have been making a practice of this, myself, ever since my interne year, and have never seen any reason to regret it; and I believe that we have saved many perinea from rupture by this procedure.

The Department of Obstetrics of the University of Texas has a very low percentage of lacerations, both in the cases delivered by the staff and those delivered by students, who show a universal and very creditable willingness to hold the head on the perineum for a length of time sufficient to permit of gradual dilatation. When lacerations do occur, we follow the technique suggested by Dr. Lee, of bringing the tissues together by as many rows of sutures as are necessary, from within outward, attempting if possible to identify the exact structures which are being united. The results of this operation are excellent.

In secondary repair, the superficial muscles of the perineum are very largely disregarded, and the levator ani is made the principal point of attack, utilizing the pelvic fascia where it is available, especially in repairs done after the child-bearing period. There has been a very low percentage of failure from this operation, and a number of cases delivered after such repair have shown a very low percentage of recurrence as the result of labor.

Dr. H. L. Wilder, Clarendon: In a very tense perineum we have the danger of pressure on the brain with the dire results that were so forcibly brought out this morning by Dr. Allison. It is my rule to follow De Lee and allow the head to tear through, if it is seen that there is danger to the head of the child, giving the child the benefit of the doubt. This gives a high percentage of lacerations, but the mother's parts must give way to the more vital part of the child.

Dr. Everett Jones, Wichita Falls: Tears of the perineum are not well understood from the standpoint of anatomy. For that reason a deep study and better understanding of the anatomy is necessary for better repairs. I prefer to use one that brings all forms of tears under one heading. One source of failure in all recognized methods of repair is the failure to bring the fibers of the levator ani muscle into opposition. Another common source of failure is that the surgeon ties his sutures too tightly and thereby strangulates the intervening tissues.

Dr. J. D. Burt, Farmersville: I am glad to learn from these discussions that you young men in the profession have lacerations. Some two years ago when the State Medical Association met in Dallas, some doctor said that the attending physician was to blame for all lacerations. I felt differently about it because I sometimes have them.

Dr. Looney, (closing): As stressed in the paper, the superficial perineal muscles are exceedingly difficult to identify; and I agree with Dr. Cooke that in the repair of deep lacerations they may be ignored, provided the anterior fibers of the levatores ani muscles are fixed to the central body. In the more superficial tears, however, an effort should be made to reconnect the superficial muscles to the central body, if we expect to maintain a normal vaginal outlet.

The Scientific American on Abrams' "Electronic Reactions."—In October, 1923, the Scientific American announced that it was undertaking an investigation of the "Electronic Reactions of Abrams" and electronic medicines in general. The Scientific American has published twelve papers and the last has now appeared. The result of the exhaustive investigation of the committee may be summed up: The electronic reactions of Abrams and electronic medicine in general is found utterly worthless. This is expressed a little more in detail in the opening paragraph of the last article: "The so-called Electronic Reactions of Abrams do not exist—at least objectively. They are merely products of the Abrams practitioners' mind. These so-called reactions are without diagnostic value. And the Abrams oscilloclast, intended to restore the proper electronic conditions in the diseased or ailing body, is barren of real therapeutic value. The entire Abrams' technique is not worthy of serious attention in any of its numerous variations. At best, it is all an illusion. At worst, it is a colossal fraud."—*Jour. A. M. A.*, Sept. 20, 1924.

MISCELLANEOUS

NOTICE TO MEMBERS OF SECTION ON OPHTHALMOLOGY, OTOLOGY, RHINOLOGY AND LARYNGOLOGY.

You are invited to send in applications to section chairman for places on the program of the next annual session. Papers, together with synopses not exceeding 150 words each, must be submitted by March 1. The names of two members expected to open discussions of each paper should be submitted. Those accepting the responsibility for opening discussions should have their discussions typed and ready to submit to the secretary. Attention is called to editorial on page 268 of the September JOURNAL.

E. L. GOAR, M. D., Chairman,
1300 Walker Avenue, Houston.

O. H. JUDKINS, M. D., Secretary,
712 City National Bank Bldg., San Antonio.

NOTICE.

Scholarships on the Oliver-Rea Foundation for graduate study in medicine are available at the New York Postgraduate Medical School and Hospital.

Inquiries should be addressed to the Dean, 301 East Twentieth Street, New York City.

TRI-STATE MEDICAL SOCIETY MEETING.

The Tri-State Medical Society will hold its twentieth annual session at Shreveport, Louisiana, December 10-11. The following doctors will act as section chairmen during that meeting: *Surgery*, Dr. J. A. Hendrick, Shreveport, La.; *Medicine*, Dr. Wm. Hibbitts, Texarkana, Ark.; *Gynecology*, Dr. Joe Becton, Greenville, Texas; *Pathology*, Dr. Chas. F. Carter, Dallas, Texas; *Eye, Ear, Nose and Throat*, Dr. V. R. Hurst, Longview, Texas; *Urology*, Dr. I. B. Rougon, Shreveport, La.; *Miscellaneous Topics*, Dr. Nettie Klein, Texarkana, Texas.

Those wishing to present papers at this meeting should notify the proper section chairman at once, or write the Secretary, Dr. Frank H. Walke, Shreveport, La., giving the subjects of their papers, and he will refer them to the proper section. Special arrangements have been made for entertaining the ladies who wish to attend the meeting. A great session is anticipated.

PEACE AT LAST.

A recent issue of the *Chicago Health Bulletin* reproduced the following entertaining letter, which a Kansas citizen wrote to the editor of his local paper:

"I wish to thank the city authorities for quarantining my family and me recently for three weeks because one of them had smallpox. During that time my wife caught up with her sewing. We had three square meals every day, as no one came in, and she was not permitted to leave. We enjoyed three weeks of good nights' sleep, and best of all a cousin with four children, who had arranged to visit us, saw the smallpox sign on the door and left town so scared that she will never come back again."

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Medicinal Dyes.—The dyes which are used in medicine may be divided into five classes: (1) the azo dyes, of which scarlet red medicine and scarlet red sulphonate are described in New and Nonofficial Remedies; (2) the acriflavine dyes, such as acriflavine, neutral acriflavine and proflavine; (3) the fluorescine dyes, usually combined with metal mercury such as mercurochrome-220 soluble and flumerin; (4) the triphenolmethane or rosaniline series, such as gentian violet, crystal violet, methyl violet and fuchsin, and (5) miscellaneous dyes, such as methylene blue, phenolsulphonephthalein and tetrabromphenolphthalein. In order to obtain comparable results when employed clinically, dyes should be of constant composition. The triphenolmethane (rosaniline) dyes include fuchsin and the closely related violet dyes, gentian violet, crystal violet and methyl violet. Of these, gentian violet is the one that has been used chiefly in medicine. It is stated to have the property of great penetration; to be bactericidal also bacteriostatic in vivo toward selective organisms. Its chief use has been in the treatment of infections of the pleural cavity and of the joints. The intravenous use of gentian violet has also been proposed in staphylococcus septicemia, chronic cystitis, osteomyelitis.

Gentian Violet Medicinal.—A mixture of pentamethylpararosaniline and hexamethylpararosaniline chlorides. For direct application, a solution of from 1:500 to 1:1,000 may be employed; for instillation, a 1:10,000 solution. For intravenous use, 5 Mg. per Kg. of body weight, injected in 0.5 per cent. solution has been used.

Gentian Violet Improved Medicinal.—A brand of gentian violet medicinal—N. N. R. Coleman & Bell Co., Norwood, Ohio.

Gentian Violet Medicinal-"National."—A brand of gentian violet medicinal—N. N. R. National Aniline & Chemical Co., New York.

Insulin-Stearns Quadruple Strength.—Insulin-Stearns (see *Journal A. M. A.*, June 14, 1924, p. 1937), marketed in 5 cc. vials containing forty units in each cc. Frederick Stearns & Co., Detroit.

Sulpharsphenamine-Squibb, 1 Gm. Ampules.—Each ampule contains sulpharsphenamine-Squibb (see New and Nonofficial Remedies, 1924, p. 68), 1 gm. E. R. Squibb & Sons, New York.

Diphtheria Toxin-Antitoxin Mixture (New Formula).—Diphtheria toxin-antitoxin mixture-Squibb (see New and Nonofficial Remedies, 1924, p. 298), marketed in packages of thirty gc. ampules. E. R. Squibb & Sons, New York.

Antistreptococcic Serum-Squibb.—Antistreptococcic serum-Squibb (see New and Nonofficial Remedies, 1924, p. 305), marketed in packages containing one 10 cc. syringe; in packages containing one 50 cc. vial. E. R. Squibb & Sons, New York.

Antistreptococcic Serum Rheumatic-Squibb.—Antistreptococcic serum rheumatic-Squibb (see New and Nonofficial Remedies, 1924, p. 305), marketed in packages of one 20 cc. vial; in packages of one 50 cc. vial. E. R. Squibb & Sons, New York.—*Jour. A. M. A.*, Sept. 6, 1924.

Ampules Pituitary Solution-Wilson, 0.5 Cc.—Each ampule contains pituitary solution-Wilson (see New and Nonofficial Remedies, 1924, p. 229), 0.5 cc. Wilson Laboratories, Chicago.

Thiosinamine - Thiosinamina - Allylthiourea.—Thiosinamine is being used against arsphenamine dermatitis. This use is still in the experimental stage. Thiosinamine was originally introduced to promote absorption of scar tissue, lymphatic swellings, etc. Its restricted use indicates that it has little if any value for this purpose. Although it is usually well borne, except for its bitter taste and acid eructation, it may produce toxic systemic effects, and these may set in suddenly after it has been used for a time without toxic effects.—*Jour. A. M. A.*, Sept. 13, 1924.

Oridine.—The calcium salt of the iodized fatty acids of cotton seed oil. It contains from 23 to 25

per cent. of iodine in organic combination. Oridine acts in the system similarly to the inorganic iodides. The iodized fatty acid radicle of oridine is not decomposed in the stomach, but a part of the iodine is split off when it enters the intestine. The undecomposed portion is readily absorbed and, as in the case of other fats, it is largely deposited in the tissues where it is slowly split up. As with other iodized fats, the action of oridine is exerted more slowly than that of the inorganic iodides. Oridine is marketed in powder and as oridine tablets for the prophylaxis of goiter, containing oridine equivalent to iodine 0.01 gm. Eli Lilly & Co., Indianapolis.—*Jour. A. M. A.*, Sept. 20, 1924.

Rabies Vaccine (Human), Phenol Killed.—An antirabic vaccine (see New and Nonofficial Remedies, 1924, p. 306), prepared according to the general method of David Sempel. The product as sold contains brain substance, 2 per cent. and phenol 0.5 per cent., suspended in physiological sodium chloride solution. It is marketed in packages of fourteen vials and a syringe, and in a package containing twenty-one vials and a syringe. Jensen-Salsbery Laboratories, Inc., Kansas City, Mo.—*Jour. A. M. A.*, September 27, 1924.

PROPAGANDA FOR REFORM.

BioFood.—This is a "patent medicine" combination put out by a concern that seems to go under various names: "Biochemical Food Products Corporation," "Bio-Products Company," and "BioFood Corporation." BioFood has been shrewdly and cleverly marketed. The impression is given that the stuff is a food and not a medicine. Its high price—ten dollars a treatment—impresses the public with its value. The treatment consists of a box labeled "A" and two bottles labeled, respectively, "B" and "C." BioFood is sold with the claim that our bodies are composed of twelve tissues containing sixteen elements, that our foods are deficient in these elements, and that BioFood supplies this deficiency and thus "Builds up the body by supplying all the elements which nature intended man to have and thus gives nature a chance to create her own antitoxins and effect a cure." BioFood has been advertised extensively in newspapers, in self-styled medical journals and by cruelly mendacious advertisements in the Chicago street cars. The A. M. A. Chemical Laboratory reports that BioFood "A" may be considered to be composed essentially of milk sugar and flavoring in which has been incorporated small amounts of iron, calcium and manganese salts and phosphate, either as such or in combination such as glycerophosphate. The Laboratory found BioFood "B" to be tablets which may be considered to consist essentially of potassium acetate, sodium chlorid, sodium sulphate and sodium citrate. BioFood "C" was a liquid resembling solution of iron and ammonium acetate, U. S. P., modified by the addition of very small amounts of calcium, magnesium and sodium and phosphate compounds.—*Jour. A. M. A.*, Sept. 6, 1924.

The Ban on Heroin.—As long ago as 1917, the Council on Pharmacy and Chemistry deleted heroin from its handbook of Useful Drugs, saying: "The Council holds that heroin has no advantage over morphin; that it has every disadvantage of morphin; and that on the whole its introduction has been harmful, in that it furnished a specious means on the one hand of avoiding the well founded popular fears of morphin by substituting another habit-forming drug." In 1920 the House of Delegates resolved, "That heroin be eliminated from all medicinal preparations; that it should not be administered, prescribed or dispensed; and that the importation, manufacture or sale of heroin should be prohibited in the United States." The recent congress enacted, June 7, 1924, a bill prohibiting the importation of opium intended for the manufacture of heroin. The Federal Narcotic Control Board has announced that it will not authorize the importation of any opium intended to replace opium or morphin thereafter converted into heroin. This will prevent the open manufacture of heroin in the United States, and as none can be lawfully imported, heroin will soon disappear from the legitimate market.—*Jour. A. M. A.*, Sept. 6, 1924.

"P-O-4" Not Admitted to N. N. R.—The Council on Pharmacy and Chemistry reports that "P-O-4" is the proprietary nondescriptive designation under which Lehn & Fink, Inc., New York, market a preparation alleged to be a mixture of two parts of tribasic magnesium phosphate and one part of tribasic calcium phosphate. The preparation is claimed to be a "therapeutically balanced" mixture which is "A New Antacid for symptoms of hyperacidity, such as 'acid' stomach, pain, heartburn, acid regurgitation, distress and gas." The Council explains that, in order that a correct estimate of the therapeutic value of tertiary magnesium phosphate and tertiary calcium phosphate may be gained, it is important that physicians use them under their proper names and base the selection of one or the other on the requirements of the particular patient. The Council found "P-O-4" inadmissible to New and Nonofficial Remedies because the use of a mixture of tertiary calcium phosphate and tertiary magnesium phosphate in fixed proportions under a nondescriptive name is irrational, and the claim that it is "a therapeutically balanced" mixture is unwarranted.—*Jour. A. M. A.*, Sept. 13, 1924.

The Forthcoming U. S. Pharmacopeia.—The committee elected in May, 1920, for the revision of the United States Pharmacopeia has practically completed its work. The responsibility for the scope of the new book was placed on the twenty-one physician members of the committee, so that the new edition should be more fully representative of the therapeutically valuable drugs than formerly. The number of medicinal substances to be included in the book is less than 650. Among the additions are acetyltannic acid, acetylsalicylic acid, barbital, phenobarbital, albumin tannate, amidopyrin, strong silver protein, mild silver protein, arsphenamin, ethylaminobenzoate, barium sulphate, calcium iodobehenate, carbon tetrachlorid, carbromal, chloramin, cholorinated paraffin, dextrose, dichloramin, epinephrin, neoarsphenamin, chaulmoogra oil, phenolsulphonphthalein, procaine hydrochlorid, quinidine, sulphate, quinine ethylcarbonate, sodium diphosphate, barbital sodium, whiskey, brandy, thyroxin. Most of these are products of recognized therapeutic or diagnostic usefulness. Many of the preparations are already described in Useful Drugs, and a still larger number are included in New and Nonofficial Remedies. In many cases of the descriptions and standards in New and Nonofficial Remedies have been adopted for the new Pharmacopeia. In the new book obligatory biological tests are given for the following drugs and their preparations: Aconite, cannabis, digitalis, epinephrin solution, ergot, pituitary solution, squill and strophanthus. With many of the useless or doubtfully valuable drugs eliminated and with the addition of a number of substances of demonstrated merit, the new Pharmacopeia will deserve greater support from the medical profession than has been the case with previous editions of the book.—*Jour. A. M. A*, Sept. 20, 1924.

Mercurochrome-220 Soluble and Gentian Violet Intravenously.—Reports on the intravenous use of mercurochrome-220 soluble and of gentian violet have been published. These drugs, when adminis-

tered intravenously, are used in recently prepared aqueous solution. Of mercurochrome, 5 mg. per kg. of body weight appears to be generally used. It is used in a one per cent. solution. Of gentian violet, 0.25 per cent. of an aqueous solution is used; the dosage being 5 mg. per kg. of body weight. Mercurochrome-220 soluble marketed by Hynson, Westcott and Dunning, Baltimore, gentian violet medicinal-"National" of the National Aniline and Chemical Co., New York, and gentian violet improved medicinal of Coleman and Bell Company, Norwood, Ohio, have been accepted for New and Nonofficial Remedies.—*Jour. A. M. A.*, Sept. 20, 1924.

Asthma-Tabs.—The Asthma-Tabs Laboratories of Kansas City, Mo., conducts a piece of mail-order quackery in the sale of an alleged cure for asthma known as "Asthma-Tabs." The point of contact between quack and victim is, as usual, the venal or careless newspaper or magazine which sells its advertising space to herald the false statement of the Asthma-Tabs promoter. As usual, trial treatments are offered at a sliding scale of prices. The A. M. A. Chemical Laboratory analyzed this alleged "asthma cure" and concluded that each "Asthma-Tab" contains the equivalent of potassium iodid, 0.35 gm.; potassium sulphate, 0.15 gm.; arsenic trioxid, 0.0005 gm. Thus this asserted new discovery contains as its essential constituents two drugs—potassium iodid and arsenic trioxid—that have been used for a generation in the treatment of asthma and may easily both be harmful and dangerous when used without care or ignorance of their action.—*Jour. A. M. A.*, Sept. 27, 1924.

Guaisodide.—No report of Guaisodide of George A. Breon has been published by the Council on Pharmacy and Chemistry and no product of the firm has been accepted for New and Nonofficial Remedies. Many of the preparations of the Breon Company are intravenous specialties marketed under nondescriptive proprietary names. Some of these bear a strong resemblance to intravenous specialties that have been the subject of adverse reports by the Council on Pharmacy and Chemistry. Thus Guaisodide is similar in composition and claims to "Venodine" which was reported on adversely by the Council. Like Venodine, Guaisodide is stated to be a solution containing sodium iodid, guaiacol and creosote. The report of the Council on Venodine brings out that there is no reason for resorting to the intravenous administration of iodids. Further, the Council pointed out that the indiscriminate administration of iodids for pulmonary tuberculosis is strongly to be condemned. Also, the Council holds that there is no evidence to warrant the intravenous administration of guaiacol and creosote and that the combination of two such similar substances as creosote and guaiacol (the second a constituent of the first) is irrational.—*Jour. A. M. A.*, Sept. 27, 1924.

NEWS

U. S. Veterans' Bureau Hospitals were opened on October 15, at Excelsior Springs, Missouri, and Camp Custer, Michigan. The Missouri hospital is open to all classes of patients and has 125 beds; the Michigan hospital is reserved for mental cases and has 527 beds.

Denton County Hospital Bonds will be voted on November 22, according to the county commissioners' court. Bonds to the amount of $100,000 will be issued for the erection of a county hospital at Denton if the vote is favorable. Anticipating that the issue will carry, arrangements have already been made for disposing of the bonds.

New Officers of the Southwestern Medical Association, which met at Kansas City, Mo., October 13-18, have been elected as follows: Dr. Truman C. Terrell, Fort Worth, President; Drs. S. J. Wolferman, Ft. Smith, Ark., E. C. Duncan, Fredonia, Kansas, C. B. Francisco, Kansas City, Mo., and S. E. Mitchell, Muskogee, Okla., Vice-Presidents. Dr. E. H. Skinner, Kansas City, Mo., was re-elected Secretary-Treasurer.

El Paso was chosen as the place for the next annual meeting.

Delay Again Causes Diphtheria Fatality.—On a secluded farm in eastern New York two children developed sore throats and malaise about the middle of July. They were treated with home remedies by their mother and recovered. On July 23 a third child came down with the same symptoms. Four days later, when this girl "lost her breath," the father "mistrusted something" and called a physician who promptly responded. Despite all he could do the child died from diphtheria some twelve hours later.

The father would have called a physician earlier had he appreciated the seriousness of the case. When will the public learn that sore throat accompanied by fever may mean diphtheria and that a physician should be called in such cases *without delay?*—*Health News*, October 13, 1924.

Virulent Smallpox Invades New York State.—The first death from virulent smallpox in New York State for more than three years, occurred September 25. This was one of the two cases reported recently from Elmira, some comment on which has been made in recent issues of *Health News*. The last previous death from virulent smallpox was in Buffalo in March, 1921—a traveler from Illinois was taken off a train in that city because of his illness and died a few days later in the Municipal Hospital.

The Elmira cases were a sister, referred to above, and a niece of a pupil nurse, who is believed to have died in Pittsburg, Pa., from hemorrhagic smallpox. Neither of them were in Pittsburg, however, although another sister of the nurse, Mrs. X, was there for a day before the nurse died. Mrs. X was successfully vaccinated at that time and neither she nor her three unvaccinated children developed smallpox. Furthermore, five weeks elapsed between the death in Pittsburg and the onset of the first case in Elmira, indicating that if Pittsburg was the source there must have been an intermediate case, which has not been discovered or, *possibly*, some infected article was received two or three weeks after the death of the Pittsburg case.

The invasion of this state by virulent smallpox has not been unexpected in view of its recent occurrence in Detroit, Toledo, Pittsburg and Cleveland, and considering the large number of unvaccinated people residing in New York municipalities other than first and second-class cities.—*Health News*, October 13, 1924.

Faculty Changes, Medical Branch University of Texas.—Dr. William Keiller, Dean of the State Medical College, has announced the following changes in the faculty of that institution: Appointment of Dr. W. R. Cooke as Acting Professor of Obstetrics and Gynecology, to fill the vacancy created by the death of Dr. Geo. H. Lee; Dr. E. L. Porter, former Assistant Professor of Physiology in Western Reserve University, to fill the vacancy in the chair occasioned by the resignation of Dr. C. C. Gault; Mr. F. Gidley, Ph. G., formerly Professor of Pharmacy in Purdue University, to fill the vacancy created by the death of Dr. R. R. D. Cline, and Mr. W. R. Neville, Ph. G., as Associate Professor of Pharmacy (a new chair); Drs. Bain Loake, P. K. Connor and C. Pudgley, Instructors in Anatomy, and Tutor D. B. Calvin, In-

structor in Biochemistry; Dr. Abe Alexander, Instructor in Pathology; Dr. J. C. Pegues, Adjunct Professor in Physiology; Dr. Geo. T. Lee, Jr., Instructor in Obstetrics; Dr. Anna M. Bowie, full time Adjunct Professor in Practice of Medicine; Dr. H. J. Rietzel, full time Instructor in Clinical Medicine and Pathology, and Adjunct Professor Atkinson has been appointed to full professorship. In the Department of Chemistry, Associate Professor H. R. Henze has been raised to the rank of Professor, and three Instructors, F. F. Hood, F. D. Galbraith and Alice Klotz, have been appointed. Miss Irma Smith has been raised to the rank of Adjunct Professor in Pharmacy, and C. C. Calbers continues to serve as Instructor. In the College of Nursing, Miss Margaretta Perkins has been appointed Matron of the Nurses' Home, in the place of Miss Mable Aiken, resigned, and Miss Theresa Wagner will take Miss Perkins' place as First assistant to the Director, while Miss Zora McAnelly will become Instructor in Nursing.

SOCIETY NEWS

Angelina County Medical Society met at Hotel Angelina, Lufkin, Texas, October 17, with the following members in attendance: Drs. C. E. Alexander, J. W. Hawkins, A. E. Sweatland, H. M. Wilson, R. B. Bledsoe, L. H. Denman, R. L. Mathews, R. T. Canon, L. T. Tinkle, O. M. Dillon, C. B. Stewart and T. A. Taylor.

A splendid five-course dinner was enjoyed by the members of the society, following which they repaired to the Chamber of Commerce where a business session was held. There being no scientific program, a number of the members made interesting extemporaneous talks, all of which were thoroughly enjoyed.

Atascosa County Medical Society met at the Spreading Oaks Hospital, Pleasanton, September 9, with the following members and visitors in attendance: Dr. and Mrs. S. D. Luse and Dr. and Mrs. Roger Atkinson, all of Pleasanton; Dr. Whittet of Anchorage; Dr. Guynes of Jourdanton; Dr. Schotts of Poteet, and Harry Whittet of Anchorage.

A 6:00 o'clock dinner was served at the hospital by its manager, Mrs. Pearl Hites, who also extended an invitation to the society to make the hospital the regular meeting place.

Bexar County Medical Society met October 2, with 50 members and 7 visitors in attendance.

Dr. Hiram A. Phillips read a paper entitled "Appendicitis Chronic." This paper was based on the large experience which the author had had in the Medical Corps of the United States Army. He stressed the fact that 80 per cent of cases can be diagnosed by means of the x-ray. He thought that no case should be operated on unless this means of diagnosis had been employed. He gave a detailed report of the leucocyte count in a large series of cases.

Lieutenant Colonel Raymond Metcalfe opened the discussion by stating that at Ft. Sam Houston, during the past fifteen months, a laboratory report had been secured on every appendix removed routinely when other abdominal work was being done. Out of 381 cases, 264 showed chronic inflammation, or, in other words, 70 per cent of the appendices which had not shown any definite symptoms, were diseased. He agreed with Dr. Phillips that operation usually relieved the puddling of caecal contents and that a gastrointestinal series should cover a period of 48 hours or more. He stated that a relatively large percentage of upper abdominal conditions were also relieved by appendectomy.

Dr. Homer T. Wilson stated that Dr. Skinner of Kansas City, had first pointed out that nearly every normal appendix is patulous up to thirty years of age, but that after this any appendix that can be visualized even in twelve hours should be looked upon with suspicion. He thought too much stress has been laid on the leucocyte count, although it is of undoubted value, especially in differentiating subacute appendicitis from early typhoid fever.

Dr. S. P. Cunningham believed the leucocyte count to be of particular value in differentiating appendicitis or pneumonia in children, stating that the leucocyte count was usually higher in pneumonia. He stated that he had recently seen a case with undoubted symptoms of ectopic pregnancy and also symptoms of acute appendicitis. The leucocyte count was 16,000, with a high percentage of polys. Operation revealed an ectopic pregnancy and acute appendicitis.

Dr. C. S. Venable thought that it was unfortunate that no standard had been adopted in speaking of chronic appendicitis. He stated that the nonemptying appendix was usually brought out clearly in the 48-hour series and that propably one hundred per cent of the appendices showing definite symptoms, would also show positive inflammation. Remembering that the characteristic leucocyte count in chronic appendicitis is from 10,000 to 12,000, will be helpful in differentiating this from other conditions. He had recently seen a pregnancy complicated by pain in the right side, pus in the urine and a blood count of 22,000. Because of the high blood count he had been able to decide at once that the case was one of pyelitis rather than appendicitis. As a rule, the percentage of polys becomes of greater value as the chronicity progresses.

Dr. L. B. Jackson asked how Dr. Phillips was able to make his diagnosis in the 21 per cent of cases of retrocaecal appendicitis reported, when he had stated that in this type of appendix the gastrointestinal series was of little value.

Dr. O. J. Potthast stated that during the two months he had spent at Dr. Coffey's clinic in Portland, Oregon, he had noticed that Dr. Coffey always paid particular attention to the chronically inflamed appendix, associated with a dilated, mobile cecum. A simple appendectomy in such a case, without plication of the dilated caecum, would give discouraging results.

In closing, Dr. Phillips stated that when one was operating on a man and was sure of the diagnosis, the McBurney incision was preferable, but the right rectus incision was better when operating upon women, or in any case that might require exploration. He thought that the personal equation entered into the evaluation of the leucocyte count. He stated that the temperature in appendicitis was rarely above 102° F., and that the retrocaecal appendix could be visualized only when the cecum had emptied, and that even then visualization is very poor. He had had little experience with plicating the caecum or with operations in visceroptotic individuals.

Major E. L. Parmenter announced the meeting of Military Surgeons, which will be in San Antonio, November 13-15. He stated that representatives from twenty-two foreign nations had accepted invitations to attend this meeting. A motion by Dr. McGlasson that a committee be appointed to cooperate with the committee appointed by the Army Post to entertain the visiting surgeons, was carried.

Dr. G. W. Wentz was received by transfer from the Webb County Medical Society.

Resolutions of condolence on the death of Dr. Harry L. Leap, were adopted.

Cameron County Medical Society met at Brownsville, September 25, with the following members

present: Drs. Brown, Cash, Davidson, Hunter, Lawrence, Loew, Rentfro, Sizer, Tribble, Utley, B. M. and R. L. Works and Johnson.

The following visitors were also present: Drs. McGee and Conard of Hidalgo County, Major Todd of the U. S. Army, Dr. A. J. Pollard of Harlingen, and Drs. R. S. Adams and Homer T. Wilson of San Antonio.

Dr. R. S. Adams of San Antonio, read a paper on "Routine Blood Pressure Determination," which was discussed by Drs. Utley and Todd.

Dr. Homer T. Wilson of San Antonio, read a paper entitled "Intestinal Obstruction," which was discussed by Drs. Cash and Davidson.

Dr. A. J. Pollard of Harlingen, was received by transfer from the Brazoria County Medical Society.

A committee consisting of Drs. B. M. Works, R. E. Utley and John Hunter, was appointed to confer with the Hidalgo County Medical Society to arrange a program of entertainment for the Southwest Texas District Medical Society, which is to convene in the Valley next January.

Cameron County Medical Society met at San Saba, October 14, with the following members and visitors present: Drs. Brown, Cash, Cole, Hunter, Lawrence, Loew, Letzerich, Morris, Pumarejo, Spivey, Sizer, Tribble, Utley, Vinsant, B. M. and R. L. Works, Yantis, Johnson, Pollard, J. G. Webb of Mercedes, S. H. Crews, D. D. S., of San Benito, Holman Taylor of Fort Worth and I. L. McGlasson of San Antonio.

The first feature of the program was a supper, which was very much enjoyed by the doctors and their wives and relatives. During the course of the evening, Dr. Holman Taylor of Fort Worth and Dr. I. L. McGlasson of San Antonio, entertained the banqueters with short addresses. After the supper, Dr. McGlasson gave an illustrated lecture on the "Diagnosis and Treatment of Syphilis," which was discussed by Drs. Morris, Yantis, B. M. Works, Cash, Tribble, Vinsant and Utley.

Dr. Holman Taylor, Secretary of the State Medical Association, addressed the society on "The Problems of the Medical Profession." He stressed particularly the need of selling scientific medicine to the suffering public, not for the purpose of getting business for the medical profession but in order to supply the people with what they need and must have. This involves, he said, not alone the instruction of the public as to the value of the discoveries of science utilized in the practice of medicine, but impressing the public with the importance of preserving the integrity of scientific medicine and electing legislators to protect the Medical Practice Act, which is the only assurance the public may have that those authorized to practice medicine are at least basically competent.

A full account of the publicity campaign, together with the results as reflected in the personnel of the next legislature, was given, including the cost of same, in detail. Ways and means of providing funds for future campaigns, were discussed, the availability of the advertising pages of the JOURNAL for that purpose being stressed. Members were urged to by all means encourage the use of the advertising pages by those reputable concerns soliciting their business. The speaker urged that this enterprise be insistent but on a basis of reciprocity rather than boycott. The ethical medical journals were contrasted with those departing from the clean and clear-cut ethics of the profession, both in the matter of their reading and advertising pages. Many of the more intimate and detailed affairs of the Association were discussed and many questions answered.

Ellis County Medical Society held an open meeting October 14, in the Sims Library Auditorium, at Waxahachie.

Dr. H. I. Gosline, director of the Dallas Child Guidance Clinic, delivered a lecture on "The Community Responsibility in Child Guidance." He stated that more and more attention is being given to mental hygiene and the problems arising from lack of understanding and lack of training of the unusual, the peculiar or the "difficult" child. He especially urged the importance of the recognition of this problem and the obligation that it entails, by parents, teachers and welfare workers.

Dallas County Medical Society met September 25, with 58 members present.

Mr. J. L. Booty, who was present by invitation, presented a young man whom he had been treating for stammering and who had been unable even to make his wants known or to recite in his class work at school before beginning treatment under Mr. Booty's instructions. After only three weeks of such instruction he was able to stand before the medical society and speak very clearly without stammering, for ten minutes. He was loud in his praise for the work that Mr. Booty is doing.

Dr. Gaulding reported the case of a man, twenty years of age, who died about fifteen minutes after having been stung by a number of bees.

Dr. Seeley reported the case of a man who presented himself with a small tumor on the right side of his neck, which was sore and tender to the touch. He had had mumps in May but that had no connection with his present condition. A diagnosis of thyroglossal cyst was made and the thyroglossal duct was removed.

Dr. Grigsby reported the case of a man with a strangulated hernia, who had continued to vomit after the hernia had been reduced. Having seen a similar case several years previously he was able to make a pre-operative diagnosis of a knuckle of gut being caught in a small opening. The patient made an uneventful recovery following operation.

Dr. Carpenter reported the case of a lady, 28 years of age, who had suffered from sick headaches since February. These headaches had been very severe for the last six weeks and she was blind in one eye and nearly so in the other, because of choked discs. The intracranial pressure was so great that the sutures of the skull had separated. She has a fully developed tumor, not definitely localized but probably in the third ventricle.

Dr. Coble reported the case of a lady who had been struck on the side of the jaw and left unconscious. When she regained consciousness she was in the hospital where several stitches had been taken to repair the injury to the jaw. After she left the hospital she came to Dr. Coble's office to have the stitches removed. Her jaw was greatly swollen and very painful, and on examination, several large blebs containing serum were found in the throat. These blebs were punctured and the patient made a satisfactory recovery.

Dr. John R. Lehman read a paper on "Some Aspects of Headache," which was discussed by Drs. D. W. Carter, E. R. Carpenter and Geo. L. Carlisle.

Drs. Leroy M. Cochran, Eva Teague, Joseph Wolfe, Lewis B. Holland, Elliott Holland, P. Merritt Girard, Jesse Bedford Shelmire, Thos. J. Calhoun and Nina Fay Calhoun were elected to membership, and Dr. W. D. Poe was received on transfer from the Grayson County Medical Society.

A letter from Dr. Holman Taylor was read by the secretary, in which attention was invited to the report in the daily press that one of the commissioners opposed vaccination of school children. A committee was appointed to investigate this condition

and report the result of such investigation to the society.

Dallas County Medical Society met October 9, with 82 members and 10 visitors present.

Dr. A. B. Small announced the object of the meeting, stating that the members of all legalized schools of medicine in Dallas had been invited to meet with the society to consider ways and means for enforcement of the Medical Practice Act. He introduced Dr. D. R. Venable, Assistant State Secretary, who spoke at some length, outlining and discussing the necessity for raising the State dues to $15.00. He also urged strict enforcement of the law as it now stands upon the statute books, discussing the surprising lack of knowledge that many people have in regard to the real provisions of the Medical Practice Act.

Dr. T. J. Crowe, Secretary of the State Board of Medical Examiners, was then called upon. He urged the coöperation of all doctors of Texas of whatever school, in the prosecution of violators of the Medical Practice Act, discussing the amendment to that Act in particular. He read copies of letters that he had written to grand juries and prosecuting attorneys in the State, urging them to prosecute violators of the Medical Practice Act, in compliance with the law.

Dr. D. S. Harris was invited to speak and he stated that the Osteopathic Association was with the State Medical Association heart and soul (and with their pocketbooks if necessary) in the prosecution of those attempting to practice medicine illegally.

Dr. Lawrence L. Keller read a paper entitled "What Have We Done Toward the Enforcement of the Medical Practice Act?", which received much applause.

Dr. C. M. Rosser presented a plan for a public health league for the purpose of enforcement of all public health measures.

Dr. John O. McReynolds then urged that all the forces of the State that should be interested in this question of enforcement of laws protecting the public health, should work in perfect coördination.

The next speaker was ex-Governor O. B. Colquitt, who stated that in his opinion the medical profession had made tremendous advances, especially in the last two decades, and that in fact all professions had advanced satisfactorily, except the profession of politics, which he thought was degenerating. He then compared the situation confronting the ethical practitioners of medicine to that which confronted the Texas Cattle Raisers' Association. In order to stop the depredations of cattle thieves, this latter Association employed special attorneys and abandoned, at least to a large measure, the manila rope necktie parties that used to be held for the delectation of cattle thieves. He urged that the State Medical Association employ a general attorney and special investigators and prosecutors, prophesying that if they did so, they would drive out all violators of the Medical Practice Act, just as the Cattle Raisers' Association had made cattle thieves exceedingly rare specimens.

Dr. John S. Turner, in a short statement, endorsed the plan as outlined by Governor Colquitt.

Dr. J. J. Terrill then offered the following motion: "I move that it is the sense of this body that our Councilor, Dr. A. B. Small, be requested to urge the Board of Councilors to proceed with the organization of a 'Public Health League,' and also a legal department of the State Medical Association, employing attorneys and beginning with prosecutions of violators of the Medical Practice Act, as soon as possible."

This motion, after considerable discussion, was passed unanimously.

Dr. John L. Jenkins was elected to membership.

Hale-Floyd, Briscoe-Swisher County Medical Society met at Plainview, September 15, at the Ware Hotel, where luncheon was served to the following doctors, their wives and friends: Drs. Holman Taylor, Fort Worth; R. S. Killough, Amarillo; C. C. Gidney, J. C. Anderson, L. C. Wayland, D. P. Jones, E. Lee Dye, J. L. Guest, E. O. Nichols, E. F. McClendon and J. F. Owens of Plainview; S. J. Underwood, Hale Center; A. R. Matthews, Muleshoe; J. Ed Crawford, Tulia, and Mr. J. M. Adams of Plainview.

After the luncheon a scientific session was held at the offices of Drs. Anderson and Gidney, with the following doctors in attendance, in addition to those who participated in the luncheon: Drs. G. V. Smith, Floydada; C. I. Holt, Olton, and C. A. Cantrell, Plainview.

This meeting of the society was a special meeting, called to hear a message from Dr. Holman Taylor of Fort Worth, State Secretary.

Dr. R. S. Killough, councilor for the Third District, made one of his usual forceful and entertaining talks, stressing the importance of attending medical society meetings in order to keep in touch with the latest medical progress.

Dr. Taylor outlined the progress of the Educational Campaign and detailed plans that the Association has for its continuance. He also urged the doctors' wives and daughters to work in co-operation with the medical societies through their auxiliaries. He praised the work that had already been done in some instances, citing these as examples of what could be done by other Ladies' Auxiliaries. He stated that the Sheppard-Towner Bill possessed features which made it objectionable and which the medical fraternity should never have permitted to become a law.

The meeting was a very enthusiastic one and should result in much good.

Lampasas County Medical Society met at Lampasas, October 7, with a full attendance on the part of the members, the following guests being present also: Drs. Pearce of Izoro, Lowe of Lometa and Beaumont of San Saba. After luncheon at the Hotel Wachen, a discussion of public health questions was participated in by all present.

The next meeting of the society will be held at San Saba, the date not having been definitely decided upon.

Potter County Medical Society met at Amarillo, October 6, with about 30 doctors in attendance, many of them accompanied by their wives. Dr. Holman Taylor, Secretary of the State Medical Association, and his wife, were guests of honor at the noonday luncheon held in the banquet room of the Hotel Palo Duro. After the luncheon, Dr. Taylor spoke for an hour on proposed legislation of interest to the medical profession and the public. During his address he displayed numerous half and quarter-page advertisements that had been used in the Educational Campaign being sponsored by the State Medical Association. Concluding his remarks, Dr. Taylor showed how the press could be of great service in promoting the public health and urged a better understanding between the medical profession and the press.

Tarrant County Medical Society met September 16, with 40 members present.

Dr. C. P. Schenck read a paper entitled "Ranula." He defined this condition as being a cystic tumor in the floor of the mouth, resulting from an occlusion of Wharton's duct with the consequent damming back of the secretions from the sublingual and submaxillary glands. He stated that obstruction might occur from, first, pressure of a growth outside of the duct, second, the entrance of a foreign body into the duct, and third, inflammation

of the duct followed by the formation of a plug of hardened mucus with the deposition of lime salts. These retention cysts are filled with a clear, ropy, viscid, translucent fluid. The symptoms are swelling in the floor of the mouth, usually unilateral, marked salivation, severe pain, difficult speech and deglutition, and in severe cases suffocation may be threatened. The swelling may be intermittent, occurring with each meal and subsiding between meals, due to leakage of saliva past the obstruction, which has a ball valve action. When infection occurs, the cyst is converted into an abscess with the usual attending constitutional symptoms. Four cases illustrating different types of ranula were then reported by the author.

This paper was discussed by Dr. W. R. Thompson.

Dr. John Potts read a paper on "Prognosis in Tuberculosis." He first took up the class of cases in which prognosis is always grave, namely: (1) massive infections of infancy, (2) tuberculous meningitis, (3) miliary tuberculosis, (4) tuberculous pneumonia and (5) those cases that show a lack of immunity to the disease. He stressed the point that all cases of pulmonary tuberculosis in the adult have passed through a curable stage and that the greatest cause of failure in tuberculosis work is late diagnosis. Another cause of failure is lack of knowledge on the part of the doctor as to how to tell the tuberculous to take care of themselves. The paper was discussed by Drs. E. C. Schoolfield, W. L. Allison, Edwin Davis, Daly, McLean, Terrell, Morton, Thompson and Braun.

Drs. May Owen, C. E. Ball and W. B. Mackey, were elected to membership.

A motion was passed by the society extending an invitation to the Medical Association of the Southwest to meet in Fort Worth in 1925.

Tarrant County Medical Society met October 7, with 40 members present.

Dr. F. S. Schoonover reported 11 cases of urinary calculi which had been seen by him during the past year. These cases were presented because of the diversity of types encountered and because of the difficulties presented by some of them. An important lesson brought out was the value of cystoscopic examination in conjunction with the *x*-ray and the waxed-tipped catheter in demonstrating kidney stone. In the cases in which stones were found, all but one had shown in the *x*-ray, and the stones were either seen protruding from the ureteral meatus or the waxed-tipped catheter exhibited characteristic stone scratches. In all of these cases obstruction, grating and the rapid flow of urine, followed the passage of the catheter or sound. In two of the cases gall-bladder pathology had obscured that of the kidney in the examination by the previously consulted physician. In one case a normal appendix was removed, when the true cause of the disturbance was a renal stone. The report was discussed by

Dr. W. O. Ott read a paper entitled "Tumors of the Spinal Cord Involving the Conus and Cauda Equina." The paper was based on twelve cases seen by the author and was illustrated by lantern slides. The chief symptom of the condition is somewhat characteristic pain, usually of long duration, and beginning as lumbago or backache, which radiates to the sacrum, hip and sacro-iliac region, and later down one or both sciatic nerves, so that quite a large percentage of these patients have been treated for sciatica. The pain differs from that of sciatica, in that it occurs when the patients are lying down, and they often obtain rest at night by sitting in a chair and resting the body on a table or on the edge of the bed. If in addition to the characteristic pain there is slight anesthesia around the rectum or slight loss of bladder and bowel control, or definite paralysis, usually first affecting the perineal group of muscles, the diagnosis of cord tumor is justifiable. A lumbar puncture will often determine the diagnosis by revealing a dry tap, although the canal has been entered, or a golden yellow fluid containing a large amount of protein without pleocytosis. The treatment is the surgical removal of the tumor. In his series of twelve cases, the author reported a mortality rate of 9 per cent. He believes that the three factors which have contributed to lower his mortality rate, are (1) early recognition of the condition, (2) paravertebral anesthesia, which reduces bleeding and shock, and (3) division of the operation into two stages, where prolonged or extensive surgery is necessary.

The paper was discussed by Drs. W. L. Allison and M. E. Gilmore.

Dr. E. H. Bursey read a paper entitled "Pyelitis in Pregnancy." The author showed that there is a wide divergence of opinion as to the etiology of the condition. He has seen many cases that could only be explained by pressure on the ureter. Pyelograms and ureterograms in these cases showed no torsion or kinking of the ureter and no stricture, yet there were dilated kidney pelvics and ureters above the brim of the bony pelves. It is the author's opinion that the contours of women's pelves differ materially, and that some show not nearly so much forward projection of the promontory of the sacrum as others. In other words, the region of the sacroiliac joint is more nearly in line with the promontory than it should be, thus permitting the enlarging uterus to press more forcibly upon the ureter. Anything that obstructs the drainage of the kidney pelves lays a foundation for infection. The symptoms of the condition vary from the mild to the severe. A pregnant woman with tenderness and pain of the kidney, fever, cystitis or rigors, should at once cause a suspicion of pyelitis. Lavage of the kidney pelves with some antiseptic such as 1 per cent mercurochrome, 1/2 per cent silver nitrate, etc., is the best treatment. The author concluded his paper as follows: (1) Pyelitis in pregnancy carries a high mortality for both mother and child and hence demands early and persistent treatment; (2) if allowed to go untreated, permanent damage to the kidney and ureter may result; (3) pregnant women develop more agglutinins and bacteriolysins than uninfected pregnant women, thus increasing their resistance to the infection; (4) it is rarely necessary to terminate pregnancy because of pyelitis, if medical treatment and lavages of the kidney and pelves are begun early, and (5) a woman suffering from pyelitis should be warned against becoming pregnant again, because pyelitis tends to occur again in 50 per cent of the cases.

The paper was discussed by Drs. G. V. Morton, J. P. Lee, F. S. Schoonover, M. E. Gilmore, T. C. Terrell and R. S. Mallard.

A committee consisting of Dr. W. L. Allison, together with such associates as he might select, was appointed to confer with a similar committee of the Ladies' Auxiliary concerning the purchase of a piano for the society rooms.

The Woman's Auxiliary of the Tarrant County Medical Society met October 12. Plans for the ensuing year were enthusiastically discussed, especially plans to beautify and make more comfortable the club rooms that house both the Society and the Auxiliary.

Mrs. Arthur Brown, as leader, introduced Dr. M. E. Gilmore, who made an interesting talk on the health board contemplated in the new Fort Worth Charter which is yet to be voted upon. The social committee, with Mrs. J. M. Givens as chairman, served a delightful salad and tea course. It seems

inevitable that the Woman's Auxiliary, now somewhat in its infancy in Texas as well as in the Nation at large, will increase in size and usefulness because of the splendid field of endeavor opened to the members as doctors' wives.

Wise County Medical Society met at Decatur, October 7, with the following in attendance: Drs. Funk and Spencer of Bridgeport, Young of Crafton, Walker of Alvord, Stem of Slidell, Petty, Rogers, Ingram and Fullingim, of Decatur, and Bursey and McKnight of Fort Worth.

Dr. E. H. Bursey of Fort Worth, read a paper on "Endocrine Gynecology," which was followed by a free discussion.

The next meeting will be held in Decatur, November 4.

Northwest Texas District Medical Society met at Mineral Wells, October 14-15. The meeting was opened by an invocation by Reverend Cartwright of the Methodist Church. The welcome address of Parker-Palo Pinto County Medical Society was given by Dr. J. H. Eastland of Mineral Wells, and responded to by Dr. Joe E. Daniel of Houston. The welcome address on the part of the city was given by Mr. Ray Leeman, manager of the Chamber of Commerce, and responded to by Dr. J. E. King of Breckenridge. Music was provided by the American Legion Quartette.

Following a luncheon at 12:00 o'clock, the following scientific program was rendered: Chairman's Address (Medical Section), Dr. J. H. Eastland, Mineral Wells; "Causes of Failure in Tuberculosis Work," Dr. John Potts, Fort Worth—discussion opened by Dr. J. E. Winstead of Graham; "Impressions of the Rectal Clinics of London," Dr. Curtice Rosser, Dallas—discussion opened by Dr. W. B. Lassater of Mineral Wells; "Menstrual Disorders and the Pituitary Gland," Dr. Will S. Horn, Fort Worth—discussion opened by Dr. C. W. Stevenson of Wichita Falls; "Disturbances of the Pituitary Gland," (lantern slide demonstration), Dr. Austin F. Leach, Wichita Falls—discussion opened by Dr. B. R. Beeler of Mineral Wells; "Diagnosis of the Three Types of Goiter," Dr. E. O. Rushing, Dallas—discussion opened by Dr. A. P. Terrell of Wichita Falls; "Further Report on Nasal Ganglion Neurosis," Dr. C. B. Williams, Mineral Wells—discussion opened by Dr. R. K. Lowry of Seymour; Chairman's Address (Section on Gynecology and Obstetrics), Dr. T. S. Edwards, Knox City; "Pyelonephritis Complicating Pregnancy," Dr. Q. B. Lee, Wichita Falls—discussion opened by Dr. J. W. Powers of Wichita Falls; "Indication for Radiation Therapy in Gynecology," Dr. C. L. Martin, Dallas—discussion opened by Dr. M. H. Glover of Wichita Falls; "Cancer a Curable Disease and Causes of Failure," Dr. A. C. Scott, Temple—discussion opened by Dr. Q. B. Lee of Wichita Falls; "Symptoms and Proper Surgical and Medical Treatment of the Ovaries," Dr. S. C. Richardson, Eastland—Discussion opened by Dr. T. H. Parmley of Electra; "Hemorrhage in Ruptured Ectopic Gestation," Dr. K. M. Lynch, Dallas—discussion opened by Dr. L. Mackechney of Wichita Falls; "A New Technique for Repair of Vesico-Vaginal Fistula," Dr. A. I. Folsom, Dallas; Chairman's Address (Surgical Section), Dr. H. E. Griffin, Graham; "Hare Lip," Dr. J. E. Thompson, Galveston—discussion opened by Dr. R. L. Hargrave, Wichita Falls; "The Significance of Choked Disc," Dr. L. F. Stripling, Wichita Falls—discussion opened by Dr. G. W. Griswold of Cisco; "Elbow Fracture in Children," Dr. Chas. F. Clayton, Fort Worth—discussion opened by Dr. E. W. Wright of Bowie; "Joint Tuberculosis, Early Recognition and General Treatment," Dr. W. B. Carroll, Dallas—discussion opened by Dr. C. H. Harris of Fort Worth; "Intra-Cranial Hemorrhage from Birth Injuries," Dr. W. O. Ott, Fort Worth—discussion opened by Dr. O. T. Kimbrough of Burkburnett; "Some Experiences in Thyroid Surgery," Dr. Paul C. Gunby, Sherman—discussion opened by Dr. M. M. Walker of Wichita Falls.

Following the business session, which adjourned at 5 o'clock, the visitors were entertained by an automobile ride over the city, tendered by the Chamber of Commerce.

A banquet was held at the Crazy Hotel at 8 o'clock on the evening of the first day, over which W. O. Gross officiated as toastmaster.

Various entertainments were provided for the lady visitors by the Ladies' Auxiliary, and the golf tournament was participated in by those devoted to the game.

The following officers were elected for the ensuing year: President, Dr. Q. B. Lee, Wichita Falls; Secretary-Treasurer, Dr. H. B. Richards, Wichita Falls.

The State Pathological Society of Texas held its eighth semi-annual meeting at Houston, October 8. The following scientific program was enjoyed: "President's Opening Address," Dr. B. F. Stout, San Antonio; "The Value of Differential Leucocyte Count in Diagnosis," with lantern slide demonstration, Dr. M. D. Levy, Houston; "The Surgeon and the Pathologist," Dr. John T. Moore, Houston; "Primary Round Cell Sarcoma of the Heart, with Report of Case," Drs. W. H. Hill and Henry Hartman, Galveston; "Is the Pathologist Properly Appreciated?" Dr. M. F. Bledsoe, Port Arthur; "The Last of the Pathologist," Dr. E. F. Cooke, Houston; "Discussion of the Pathological Problems of Today," Dr. A. H. Braden, Houston.

After the scientific program a dinner was enjoyed by all, at the San Jacinto Inn.

The Texas Surgical Society held its seventeenth semi-annual meeting at the Hotel Galvez, Galveston, October 13 and 14.

On the first day of the meeting the following scientific program was presented: "Extra Pleural Thoracoplasty," Dr. F. P. Miller, El Paso; "Splenectomy for Purpura Haemorrhagica," Dr. M. B. Clopton, St. Louis; "Atypical Tie," Dr. H. L. D. Kirkham, Houston; "Sympathectomy: Report of Two cases of Raynaud's Disease," Dr. C. S. Venable, San Antonio; "Cerebral Localization," Dr. Wm. Keiller, Galveston; "The Finsterer Method of Anesthesia," Dr. Chas. C. Green, Houston; "Reconstruction of the Female Urethra," Dr. E. W. Bertner, Houston; "The Persistence of the Primitive Meso-Colon on the Right and Its Surgical Significance," Dr. A. B. Small, Dallas; "Intestinal Obstruction," Dr. Frank L. Paschal, San Antonio; "Anuria: Its Significance and Treatment," Dr. R. R. Ross, San Antonio; "The Management of Congenital Club Foot," Dr. R. M. Hargrove, Houston; "Acute Infectious Osteo-Myelitis with Report of Case," Dr. Frank Barnes, Houston.

The second day of the meeting was devoted to reports of committees and the transaction of necessary business.

The following officers were elected: President, Dr. H. M. Doolittle of Dallas; first vice-president, Dr. A. B. Small, Dallas; second vice-president, Dr. K. H. Aynesworth, Waco; secretary, Dr. H. L. D. Kirkham, Houston (re-elected); treasurer, Dr. J. B. Smoot, Dallas (re-elected); recorder, Dr. W. B. Thorning, Houston (re-elected); member of the Council, Dr. Jas. E. Thompson, Galveston (re-elected); Committee on Semi-Annual Meeting, Drs. C. W. Flynn of Dallas, and W. B. Thorning of Houston.

The next meeting will take place at Dallas, on the second Monday and Tuesday in April, 1925.

CHANGES OF ADDRESS.

Dr. W. A. Toland, from El Paso to Houston.
Dr. J. E. Adams, from Longview to Kilgore.
Dr. H. R. Thomas, from Como to Dallas.
Dr. W. S. Larrabee, from El Paso to Chandler, Okla.
Dr. R. L. Kimmins, from Temple to Beaumont.
Dr. C. W. Gray, from Comanche to Brownwood.
Dr. W. D. Poe, from Sherman to Dallas.
Dr. R. L. Howell, from Brownwood to Snyder.
Dr. Wiley Smith, from Oakwood to El Paso.
Dr. W. C. Weir, from Kerens to Lewisville.
Dr. Hillary Romines, from Kemp to Brownwood.
Dr. G. A. McBride, from Harlingen to Oklahoma City, Okla.
Dr. Chas. J. Koerth, from Sanatorium to San Antonio.
Dr. R. W. Poplin, from Waxahachie to Midlothian.
Dr. J. M. Campbell, from Brownwood to Goldthwaite.
Dr. G. A. Tittle, from Temple to Mt. Vernon.

DEATHS

Dr. Wm. D. Finney of Cuero, died at his home, June 16, 1924.

Dr. Finney was born at Aberdeen, Mississippi, March 6, 1845. He served as a Confederate soldier in the Civil War, at the close of which he moved to Gonzales county, Texas. He graduated in Medicine from the Galveston Medical College, in 1872, and ten years later graduated from the Bellevue Medical College, New York. He practiced in Gonzales county until 1906, when he moved to Cuero, Texas, where he was engaged in active practice until 1911, at which time he retired.

It was said by one who knew him intimately, that "He was a typical Southern gentleman of the old school, affable and courteous in his bearing and a man of splendid intelligence. The service he rendered and the good he accomplished in his day could not be estimated. No one in need was ever turned away from his door with an empty hand, and the nights were never too dark or too cold for him to go to the relief of a sufferer."

Dr. Finney was an active member of the DeWitt County Medical Society for a number of years, and following his retirement from active practice he was made an honorary member of that organization.

Dr. Frank Applin Lidell of Milano, Texas, died recently at his home.

Dr. Liddell was born in Genett county, Georgia, October 19, 1858. He received his early education in the public schools of Atlanta, Georgia, and graduated in Medicine from the Southern Medical College of Atlanta, March 3, 1881. He practiced in Alabama until November, 1895, when he moved to Carlton, Texas, where he practiced until 1917. He later practiced in Ridge, Texas, and from that place went to Milano, Texas, where he continued to live until the time of his death.

Dr. Liddell was a member of the Baptist Church and of the W. O. W., Masonic and K. of P. lodges. He is survived by a daughter, Mrs. Bessie Liddell Lowe of Ballinger, and a son, Dr. Geo. M. Liddell of Waco. His wife preceded him in death, in 1912.

Dr. S. T. Dodge of Corpus Christi, died of apoplexy at his home, July 23.

Dr. Dodge was born at Macomb, Illinois, July 30, 1865, and while yet quite young moved with his parents to Hamilton, Illinois, where he received his early education. He first studied medicine at Keokuk Medical College, Keokuk, Illinois, later attending the American Medical College, St. Louis, Mo., from which institution he received his M. D. degree, in 1905. He was for a time associated with his father in the Riverside Mineral Springs Sanitarium, Hamilton, Illinois, and following his graduation in medicine, practiced at St. Louis for a short time. He then came to Texas, locating at Gonzales, where he practiced until he moved to Corpus Christi.

Dr. Dodge had built up a splendid practice in Corpus Christi and surrounding territory, and his kind

DR. SHERMAN T. DODGE.

and efficient services will be greatly missed by those whom he had served for so many years. He had for eighteen years served as local surgeon of the S. A. & A. P. Railroad; he was a Mason, a Woodman of the World, an active member of the Methodist Church, and for many years preceding his death had been an active member of his county and state medical societies, at one time serving as president of the Nueces County Medical Society. He is survived by his wife and four children, Mrs. A. D. Barton of Kenedy, R. C. Dodge of Houston, Mrs. A. B. Evans of Corpus Christi and C. S. Dodge of Raymondville, Texas.

Dr. S. L. Mayo of Bishop, Texas, died at the home of his brother, Dr. O. N. Mayo at Brownwood, September 19, 1924.

Dr. Mayo was born October 18, 1874, near Lockhart, Texas. He was educated in the public schools at Lockhart, taking his degree in medicine from the Memphis Hospital Medical College in April, 1902. He began practicing near Bastrop, moving to Pendleton in 1908, and in 1909 to Belton, where he practiced until the past year, when he moved to Bishop, Texas.

Dr. Mayo was a member of the Bell County Medical Society and had been a valued member of the State Medical Association and The American Medical Association for many years. He was at the time of his

death a member of the State Board of Medical Examiners. He was a Mason, a Woodman, an Odd Fellow and an elder in the First Christian Church of Belton, in which he had for many years taught a Bible class and been very active. He was married to Miss Ellen Huddleston, April 14, 1896. Ten children were born of this union, of which eight are living. In the passing

DR. S. L. MAYO.

of Dr. Mayo, Bishop has lost one of her most honored and influential citizens and the medical profession one of its untiring and efficient members. Among the honorary pall bearers at Dr. Mayo's funeral were Governor Pat Neff, and his fellow members of the State Board of Medical Examiners.

Dr. Mayo is survived by his children, Dr. Bessie Mayo, who was engaged in the practice of medicine with her father at Bishop; Oscar, a student at Loyola Dental College; Hubert, who is a student in Baylor University Dental College, Dallas; S. L., Jr., who is in Wentworth Military Academy, Lexington, Mo., and Misses Roberta, Lottie Bell, Joyce and Billie Mayo, all of Bishop; and by his brothers, Drs. O. N. Mayo of Brownwood, O. K. Mayo of Fort Worth, and J. E, Mayo of Houston, A. F. Mayo of Robertson, and one sister, Mrs. Smith Robbins of Bishop.

Dr. Samuel E. Snodgrass of Desdemona, Texas, died October 16, following an operation.

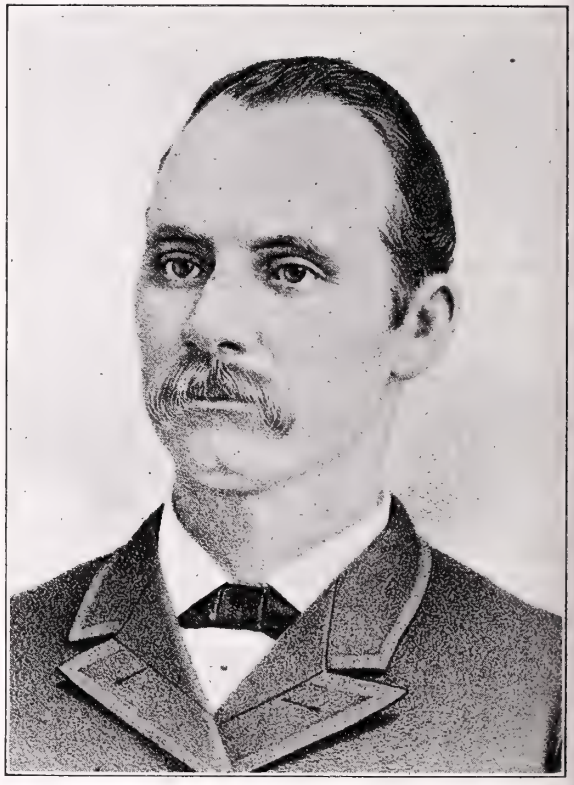
Dr. Snodgrass was born near Ashley, Illinois, January 25, 1852. He received his preliminary education in the schools of Lebanon, Illinois, and following his graduation from high school began the study of medicine in Arkansas. He received his degree in medicine from the Missouri School of Medicine, St. Louis, Missouri, in 1876, and immediately following this he came to Texas, locating at Waco, where he married Miss Louella Seawell of that city. Fourteen years later he moved to Desdemona, Texas, where he had continued to practice up to a short while before his demise.

Dr. Snodgrass was a consistent member of the Methodist Church and an active member of the Odd Fellows Lodge at the time of his death. He was a public spirited citizen of his community to which he had contributed so liberally and graciously of his time and services. At a meeting of the Eastland County Medical and Dental Society on October 24, fitting resolutions on the death of Dr. Snodgrass were passed, extending the sympathy of the members of this organization to the surviving members of his family, his wife and a daughter, Mrs. Inez Heeter.

Dr. Bascom Hamilton Vaughan of Hillsboro, died at his home, July 25, 1924.

Dr. Vaughan was born near Tuscaloosa, Alabama, February 26, 1851. He was educated in the schools of Tuscaloosa and attended Marvin College. He graduated in 1876 from the Medical College of Alabama, at Mobile. He had been actively engaged in the practice of medicine for forty years at the time of his death, thirty-two years of which he practiced in Hillsboro.

Dr. Vaughan always took an active part in his county medical society and State Medical Associa-



DR. B. H. VAUGHAN.

tion, having served at one time as vice-president of the latter. He also served for a number of years on the State Board of Medical Examiners. He was a member of the Masonic Lodge, being an enthusiastic Knight Templar, and his funeral services were conducted by this organization. He was an active and conscientious member of the First Methodist Church of Hillsboro, and has been an honored and respected citizen of Hill County for more than fifty years.

Dr. Vaughan was married to Miss Sallie Griffin in 1880, who with his daughter, Eloise, survive him. He is also survived by two brothers, Reverend S. J. Vaughan of Cisco and O. S. Vaughan of Hills-

boro, and two sisters, Mrs. A. J. Turk of Hillsboro and Mrs. Alex Melton of Barry. It was said of him that "As a physician, a neighbor, a friend and a loyal citizen, he had few peers and no superiors. His unfailing kindness and cheerfulness won him friends from all ranks of life."

BOOK NOTES

Textbook of Psychiatry. By Prof. Dr. Eugen Bleuler, Director of the Psychiatric Clinic, Zürich. Authorized English Edition by A. A. Brill, Ph. B., M. D., former Assistant Physician of the Central Islip State Hospital and Assistenzarzt of the Clinic of Psychiatry, Zürich. Lecturer on Psychoanalysis and Abnormal Psychology, New York University. Octavo, Cloth, 14 chapters, 635 pages. The Macmillan Company, New York.

This book is a translation of the author's fourth German edition, and is a welcome addition to the English literature on the subject. This most excellent work lays great stress on the psychology of mental situations, without which knowledge no student of psychiatry can thoroughly understand the subject. Dr. George H. Kirby, who writes the introduction, states that "the book makes a notable advance in psychiatry in that it emphasizes sharply the contrast between the older descriptive psychiatry of Kraepelin and the newer interpretative psychiatry of the present time, which utilizes the psychoanalytical principles and general biological viewpoints developed by Freud and his pupils in Europe, and others in this country." Although following Kraepelin's classification, Blueler goes further and gives the psychological explanation of the patient's reactions in the exhibition of symptoms. No student of psychiatry is any longer satisfied with mere symptomatic descriptions of the various mental diseases, but wants the explanatory reasons for these symptoms, based on a psychological foundation, and for this reason a long-felt need has been met in the present book. In reviewing this work, one is impressed with its completeness and wonders that so much can be fully discussed in only 635 pages. The first two chapters devoted to the psychological introduction and general psychopathology are alone worth the price of the book, and any physician, even though he is not especially interested in psychiatry, will be wiser for having familiarized himself with them. While all the mental diseases have been thoroughly covered by Bleuler in the present work, probably his most outstanding success has been that connected with the Schizophrenias (dementia praecox), and these have been covered in a masterful way. The schizophrenias constitute a large number of the cases of mentally unsound and are so little understood by the general practitioner that it behooves him to familiarize himself with them. For this purpose the present work, written by one of the world's greatest authorities on psychiatry, will fulfil his requirements in a most lucid manner.

Modern Methods of Treatment. By Logan Clendening, M. D., Assistant Professor of Medicine, Lecturer on Therapeutics, Medical Department of the University of Kansas; Attending Physician, Kansas City General Hospital; Physician to St. Luke's Hospital; Physician to St. Mary's Hospital, Kansas City, Missouri. With Chapters on Special Subjects by H. B. Anderson, M. D.; J. B. Cowherd, M. D.; Carl O. Rickter, M. G.; F. S. Neff, M. D.; E. H. Skinner, M. D., and E. R. DeWeese, M. D. Octavo, Cloth, 22 chapters, 692 pages, 77 illustrations. Price $9.00 net. C. V. Mosby Co., St. Louis, 1924.

In the author's preface he is rather severe on the works on therapeutics of his predecessors. Among other criticisms which he enumerates are that these works on therapeutics are, for the most part, badly balanced, devoting too much relative space to drugs; that they do not represent modern thought and methods, and that most of them are "written in atrocious English and in a style of deadly boredom." The author states further that he has endeavored to "show in this book that therapeutics is related to pathology and physiology." He also states that most of his references are to *current medical literature*, for the reason that this is accessible to the average practitioner who does not have at his disposal a large reference library.

The work is divided into two parts. The first part deals with the various therapeutic methods, and the first chapter is devoted to a subject which is rather unusual to find discussed in a treatise on therapeutics —Rest. The other chapters deal with: Drugs, Biologic Therapy and Prophylaxis, Extracts of the Ductless Glands, Dietetics, Heat and Cold Hydrotherapy, Medical Gymnastics and Massage, Exercise, Electrotherapeutics, Radiotherapy, Climate, Aerotherapy, Heliotherapy, etc., Psychotherapy, and the closing chapter of the first part is headed "Miscellaneous Procedures," under which are described such procedures as blood transfusion, lumbar puncture, etc.

Part II is devoted to Special Therapeutics: The Application of Therapeutics to Particular Diseases. The chapter headings under this section are as follows: The Treatment of the Infectious Diseases, The Treatment of Diseases Due to Allergy, The Treatment of Diseases of Metabolism, The Treatment of Diseases of the Blood, The Treatment of Diseases of the Cardiovascular System, The Treatment of Diseases of the Respiratory System, The Treatment of Diseases of the Kidney, and The Treatment of Diseases of the Digestive System, The Treatment of Diseases of the Ductless Glands.

It will be appreciated that in this work on therapeutics, much material that is ordinarily found in a treatise on physical diagnosis, is included. The whole plan of the book is distinctly original and it is believed that the medical student especially will find it very helpful.

Intravenous Therapy. Its Application in the Modern Practice of Medicine. By Walton Forest Dutton, M. D., Medical Director, Polyclinic and Medico-Chirurgical Hospitals, Graduate School of Medicine, University of Pennsylvania. 542 pages, illustrated with 59 halftones and line engravings, done in colors. Octavo, Cloth. Price $5.50 Net. F. A. Davis Company, Philadelphia, 1924.

The author states in his preface, "In a number of years' experience in intravenous work, during which I have given many thousands of injections to meet a wide variety of indications, I have often felt the need of aid in the solution of the problems constantly arising, yet, so far as I am aware, no manual of intravenous therapy has as yet been published. Books on blood transfusion are quite numerous * * * certain therapy has also received considerable attention from textbook writers, but medication by direct injection of drugs * * * has so far been noticed in print only by fugitive communications to medical periodicals, and in literature put out by proprietary drug firms."

The need for an authoritative work on intravenous therapy has certainly been felt, and it is believed that this need has been supplied in a very satisfactory way by this excellent work by Dr. Dutton. The first chapter in the book consists of a very entertaining "Historical Outline of Intravenous Therapy." The next chapter takes up the subject of Venesection, which, unfortunately, is a subject that has been

greatly neglected by modern therapeutists. The third chapter deals with the infusion of physiological salt solution. The next five chapters describe admirably the different methods of blood transfusion, stating the author's preference as to the particular methods applicable to certain conditions. Next is the Intravenous Therapy in Pediatrics (Chapter IX). The remainder of the book describes the intravenous medication applicable to various diseases which are considered alphabetically from "acidosis" to "yellow fever." The appendix gives various tables of measures, dosages, metric equivalents, etc. It is believed that this timely volume will be well received by the profession.

Fertility and Sterility in Human Marriages. By Edward Reynolds, M. D., and Donald Macomber, M. D., Boston, Mass., with a section on Determining Causes of Male Sterility, by Edward L. Young, Jr., M. D., Boston. Octavo, Cloth, 285 pages, Illustrated. Price $5.00 net. W. B. Saunders Company, Philadelphia and London, 1924.

This interesting volue of 22 chapters is divided into five sections, as follows: Biology, Frequency of Sterility, Physiology; The Determining Causes of Sterility in the Female; The Determining Cause of Sterility in the Male; Relative Infertility, the Marital Habit, and the Prevention of Sterility; The Clinical Conduct of a Case.

A generally neglected subject, and one that has certainly caused much mental anguish as well as physical ill health, is discussed in a very frank manner. Too many physicians treat this subject in a hasty, if not flippant, manner because they have not given it the careful consideration that it deserves. The problems discussed in this book are those which so frequently appear in the divorce courts and are often the fundamental causes of divorce. It is noted that in the last paragraph on page 39, the following statement is made: "In the human race, as in all the vertebrates, the spermatozoa * * * are manufactured in enormous numbers, although only one of them is utilized in the fertilization of the ovum." No experimental proof is offered of this statement, which I find is in conflict with opinions expressed in many authoritative works on biology and embryology. The methods of examination to determine the cause of sterility are carefully detailed and appear to have been thoroughly worked out.

The Human Testis, Its Gross Anatomy, Histology, Physiology, Pathology, With Particular Reference to Its Endocrinology, Aberrations of Function and Correlation to Other Endocrines, as Well as the Treatment of Diseases of the Testes and Studies in Testicular Transplantation and the Effects of the Testicular Secretions on the Organism. By Max Thorek, M. D., Surgeon-in-Chief, American Hospital; Consulting Surgeon, Cook County Hospital, Chicago, Ill.; President International Congress of Comparative Pathology, Rome, Italy, 1924, etc. Octavo, Cloth, 34 chapters, 548 pages, 308 illustrations. J. B. Lippincott Company, Philadelphia and London, 1924.

This unusual book presents a comprehensive study on the diseases of the testis. The clearly written text is greatly aided by the profuse and well chosen illustrations. The contemporary investigators in the field of sex gland transplantation are freely quoted and their statistics are given, as well as the results of the author's own extensive experience. There has been so much quackery and near quackery in connection with this line of work and so much of a spectacular character has appeared in the press and in "border line" pharmaceutical and biological journals, that it is pleasing to find such a conservative attitude toward the subject as that taken by the author. I wish to quote from his conclusions, as follows:

"I emphatically object to the term 'rejuvenation.' It is misleading, particularly to the laity who gain from such terminology the impression that by certain procedures the old can be made young. This is erroneous. No organ, or set of organs, can be returned, by any method known thus far, to a juvenile state when pathologic changes have made inroads on the structures and rendered them senile, in the accepted form of the term. I would suggest the substitution of the term 'Therapeutic Gonadal Implantation' in place of the promiscuously used term 'rejuvenation.' The field of usefulness for such implantation is varied and includes many conditions. Improvement in certain well-defined pathologic states can be anticipated in *properly selected* cases following the use of *proper material* and the employment of *proper technic.* Undoubtedly, further research and the accumulation of clinical data will place therapeutic gonadal implantation more firmly as a valuable addition to the armamentaria of the progressive physician."

Those interested in this subject will find in this book a complete and authoritative discussion of this special field of surgery.

Manual of the Diseases of the Eye, for Students and General Practitioners. By Charles H. May, M. D., Director and Visiting Surgeon, Eye Service, Bellevue Hospital, New York; Consulting Ophthalmogist to the Mt. Sinai Hospital, to the French Hospital, to the Italian Hospital, New York, and to the Monmouth Memorial Hospital; formerly Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Eleventh edition, Revised. 445 pages, 27 chapters, with 374 original illustrations, including 23 plates with 73 colored figures; 12 mo., Cloth. Price, $4.00. William Wood and Company, New York, 1924.

It is hardly necessary to state that May's Manual of the Diseases of the Eye justly enjoys its wide popularity. The publishers believe that it is "the most largely sold medical book in the world." It has gone through eleven American editions, most of which have been reprinted and some of which have been reprinted as many as three times. Besides the American editions, it has gone through five British editions, seven Spanish, four French, five Italian, four Dutch, two German, two Japanese, and the eighth and latest translation is in Chinese.

In this last American edition, Chapter XI on "Uveitis" and Chapter XXV on "Disturbances of Motility" have been rewritten. A number of new cuts have been added, or substituted for cuts previously used. The author concludes the preface to the Eleventh Edition with the statement that "The volume has been kept up to date, but has not been increased in size, the original plan of presenting a book for the student and general practitioner having been adhered to." The continued popularity of the book and the fact that it is used as a textbook in nearly every American medical college, is proof of the pudding.

Remember the Red Cross Roll Call

Texas State Journal of Medicine

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Christmas Greetings! We are pleased with the relationship of the JOURNAL to its readers. We know of no serious criticism, and while we are not greatly impressed with its reputation as a carrier of helpful information and glad tidings, it is a matter of great satisfaction to us to believe that it is a welcome visitor in most instances. Therefore, it is with all earnestness, and with cheerful earnestness, that we wish our readers a pleasant, merry, joyful and even profitable, Christmas.

There are many holidays in the world, even in our own country (which has been more circumspect in such matters than most countries) but, so far as we know, there is only one holiday common to all civilized countries—Christmas. And it seems to us that of all holidays, this particular one is the most appreciated. There are several holidays of a patriotic nature, some of a religious character and one devoted to thanksgiving, but none of these are so universally loved as Christmas. This is not so, in our estimation, because it is a religious celebration, although it is that. It seems that there is a desire on the part of Christianity to attribute to the nativity of Christ the most adorable traits of human nature, and that those who do not believe in Christ as a divinity wish to share in the spirit of the occasion, regardless. That is well. Indeed, the announcement of the angels in heaven that there should be peace on earth and good will to all men, has come to be fundamental.

Smile a Little

Smile a little, smile a little,
Sing a happy song;
Life is full of thorny places,
And the road seems long.

Smile a little, smile a little,
Make some one feel glad;
Earth is full of stony places,
And some heart is sad.

Smile a little, smile a little,
Life is bright as gold;
Make of earth a glorious heaven
And be blest threefold.

Smile a little, smile a little,
Be for earth a leaven,
And perhaps you'll give some soul
Just a glimpse of heaven.

—JOHN R. JARVIS, in the *Prism*.

If we are attuned properly to this celebration, and if we are normally human, we will go about endeavoring to do good for these few days, regardless of our behavior throughout the balance of the year. That means that where we can give pleasure with a gift, that the practice of gift-giving will be continued; that where we can do good by a cheerful message, the message will be forthcoming; that where we can please by a personal service of some sort, it will be gladly rendered; and that, in short, wherever an unselfish deed will produce pleasure and serve humanity, the same will be done. Thus will we enjoy the season to the fullest.

We cannot all afford expensive gifts, but whether or not that be true with any of us individually, the fact remains that the greatest asset is good cheer. We do not realize how many of our fellows are undernourished in the matter of personal interest

and good fellowship—and do not know it. It is easy to find the individual who craves friendly interest, and who will respond to advances of this sort most gratefully, but it is not so easy to pick out those who require spiritual nourishment and are not aware of it—their reaction is contrary to expectations. Perhaps our greatest service can be rendered in reclaiming some of these lost sheep. It is a mistake to feel that they are not worth saving. Physicians above all people should know that many of those whom we are pleased to designate as "grouches" and the like, are sad because they are sick, physically or mentally. It is the business of the physician to cure sick people, and there can be no doubt but the best time for treatment of these unfortunates is during the latter half of December. Truly, if we "make of earth a glorious heaven," we will be "blest threefold."

Again, and with grateful hearts, we wish our readers a Merry Christmas!

Health Christmas, 1924.—With this slogan, the National Tuberculosis Asesociation is, through its agent, the Texas Public Health Association, urging us to buy Christmas Health Seals. It is primarily intended that through the dimes thus gathered, tuberculosis may be eradicated, but it is a coincident fact that the cause of good health generally will be promoted. While the parent body has the word "Tuberculosis" in its title, many of the constituent and subsidiary organizations use the word "Health" instead. For instance, it is the "Texas Public Health Association," and not the "Tuberculosis Society," as it once was. We urge that our members give hearty support to this movement.

STAMP OUT TUBERCULOSIS WITH CHRISTMAS SEALS

We are informed that more than a billion seals have been printed for distribution throughout the United States for the current sale. Of these, 32,000,000 will be put on sale in Texas. It is expected that Texas will in this manner raise $100,000 for the war on tuberculosis and, incidentally, disease in general and bad health in particular. The amount realized from the sale of seals last year fell considerably below this amount, notwithstanding which, the funds realized were sufficient to give instruction to 82,000 adults and 67,000 school children, and for careful physical examinations of 7,800 of the latter. It is estimated that over 183,000 pieces of health literature were distributed. Some 35,000 school children were enrolled in the Modern Health Crusade, a consistent and well planned endeavor to inculcate in the future citizens of our State a regard for good health and a knowledge of the cause and effect of poor health and disease. In numerous particulars the money received last year was required to render good service, and it is anticipated that these endeavors will be materially increased during the forthcoming year.

It will be understood that the Texas Public Health Association coöperates closely with the State Health Department and the State Medical Association of Texas, and that it has no peculiar views in regard to the economics of health and public welfare. In other words, it believes that the proper sphere of the health agency, whether volunteer or official, is to teach the public the ways of health and leave the matter of treatment to the physician, who can better serve in this particular because of his close, personal relationship to his patient. Of course, we all feel that the welfare organizations should be very largely relieved of their responsibilities by the State, and to that end these organizations are in every way encouraging the State to take over their work. However, the desired end does not appear to be in sight, and until the public comes to its senses and demands that the State assume its rightful obligations in this particular, and agrees to pay the bills therefor, we must continue to thus vicariously serve the public health interests.

When the National Tuberculosis Association was organized, in 1904, statistics showed that the death rate from tuberculosis was 200 per 100,000. It has gradually declined since that time, until the low mark of 97 per 100,000 was reached in 1922. We have not seen statistics covering a later period, but feel sure that the rate is still declining and approximately in the same ratio. Formerly this disease was the leading cause of death. Statistics now show that organic heart disease and

pneumonias easily take precedent, and that other diseases are coming along. In 1922, there were 106,000 deaths from tuberculosis in the United States, and it was estimated that there were 954,000 active cases of the disease. Statisticians who deal in health matters, estimate that tuberculosis shortens the average human life two and one-half years. Getting down to finances, if these statistics are correct, and the average net earnings from individuals is only $100, there would be a per capita loss of $250, which would mean a loss of more than a billion and a quarter dollars in Texas alone. Of course, this loss is potential and not actual, but we might as well insure ourselves against it. We wonder what the financial interests of the State would say should the same losses in any line of business, as easily preventable, occur, with no greater interest being taken by the State than appears to be the case in this instance. We wonder, also, what would be the reaction of the public should some city in the United States, of 97,000 population, be wiped out each year by flood, or some other such avoidable occurrence. That is exactly what tuberculosis does. Mr. G. J. Drolet, statistician for the New York Tuberculosis Association, estimates that during the last forty-three years, more than 18,000,000 people have died from pulmonary tuberculosis. These figures were based on returns from 23 countries, representing approximately one-third of the population of the world. He estimates from these figures, that during the same time in the entire world, more than 100,000,000 people have died from this disease. He states that figures gathered from the registration area of the United States, which does not include all of our population by a considerable number, show 1,748,308 deaths from tuberculosis between the years of 1910 and 1922. Most of these deaths were among adults in the productive period of life.

There is something about the thought of saving a human life that thrills us thoroughly, particularly if the deed is accomplished in some more or less spectacular manner, but we have become so accustomed to the process of saving life and preventing suffering through health activities and medical service, that the idea does not particularly entertain us. We should not forget that it is more important from both a financial and humane standpoint, to save a life from destruction by disease, than from accident or assault. It is harder to convince our people of the truth of this assertion, but it can be done through modern publicity channels, and quite properly. This is our immediate obligation.

In the meantime, we can buy Christmas Health Seals and help induce others to do the same.

The Responsibility of the Doctor in Tuberculosis resides primarily in the matter of early diagnosis and, of course, early treatment. There are those who specialize in the study of tuberculosis, whether in the lungs or elsewhere, and to those we can send our patients suspected of being tuberculous, if we choose, but the fact remains that while an accurate diagnosis of pulmonary tuberculosis is very difficult in the early stages, the presumptive evidence is sufficiently clear to warrant treatment, and the treatment is sufficiently simple to enable any of us to handle such cases with entire satisfaction if we will. It is true that here as elsewhere, we must give some thought to the several problems involved, but that is an obligation that exists in almost any case we may assume to treat, and is no exception to the rule. Furthermore, while it is perhaps desirable to handle cases of this sort in a well organized and managed sanatorium, success may be had in any well regulated home. We sometimes prefer to send our patients away from home when they would really do better there, because of some peculiarity of personality, for the reason that we do not have the time or do not desire to go to the trouble, to give the necessary instructions, which are extensive although quite simple. If we are wise we can meet such situations by the use of literature prepared for just such exigencies, by those who have had unlimited experience. The State Tuberculosis Sanatorium, at Sanatorium, quite probably can supply our needs in this respect. The Texas Public Health Association, at Austin, has quantities of literature of this sort, and perhaps the State Board of Health can help, although the appropriations for this sort of service have been

denied the Health Department during recent months.

As to specific treatment, despite published statements to the contrary, nothing of the sort has yet been proven. Numerous investigations are being made by numerous agencies, and quite probably success will be attained before a great while, but in the meantime it is such a simple matter to deal properly with the uncomplicated case when found early, that we need not worry greatly. It is perhaps a wise provision of Providence that specifics for chronic diseases should not be discovered until the proper management in such cases has been thoroughly worked out. The discovery of insulin came at the proper time as relates to the management of diabetes. Possibly the discovery of salvarsan came somewhat early in the treatment of syphilis. There are those who claim that salvarsan should not be used as a specific in syphilis until the disease has progressed sufficiently to build up a nominal degree of resistance. If salvarsan were, as its discoverer in the beginning thought it was, a certain and complete sterilizer, that would end the argument; but it is not, and it probably happens that the remaining spirochetes do not find the resistance they would have found had the disease been allowed to progress further before the drug was given. Perhaps the same observation would apply in tuberculosis, and that it is well for us to study the matter of management further before we hit upon the specific, unless, indeed, we should find one that will promptly and completely rid the system of the organisms causing the disease.

We must not forget that it is up to us to protect our patients against quackery and foolish treatment in this most insidious disease. Psychology plays such an important role in tuberculosis that almost any treatment in which the patient can be made to have confidence will be beneficial for a time, but the physical effect of "good thoughts" of this sort, are limited, and unless supported by proper treatment there will be hard sledding just ahead. We hardly need to be more explicit. Any one of us is acquainted with numerous medicines, treatments and systems of management, that promise wonderful results and succeed only in filling up the personal storehouses of those who have these things for sale, and help to keep the fires burning in certain newspaper offices that have more need for fire than conscience. We have in our possession a card returned to the Texas Public Health Association with a rejected consignment of Christmas seals. On one side is the name and address of the "Only Palmer Chiropractor" in one of our prosperous communities. On the other side of the card is the following message: "Tuberculosis always yields to adjustments. If you are sincere put some chiropractor to work." All this organization would have to do to carry out such a policy, would be to employ any individual who could make a strong claim for any sort of treatment in which he professes to believe and in which he can induce others to profess to believe. That would be perfectly simple and simply perfect. The facts of science need not be considered. Christian scientists could go one way, chiropractors another, naturopaths another, and so on, *ad infinitum* and *ad nauseam.* It seems strange that people cannot understand that they must stick to fact and let fancy go until it proves itself, by the rules of science, to be fact, and not by uncontrolled observation, which includes so much of the important element of coincidence that it is worth while only as corroborative evidence.

The Gorgas Memorial proposition is again before us. We are in receipt of several communications from the Chairman of the Board of Directors, requesting publicity for the movement. There has been no appeal to the State Medical Association for official endorsement and assistance, and so far as we know there is no idea of connecting the State Medical Association with the memorial, except by way of personal and individual contributions. Indeed, the effort seems to have been studiously made to keep this project outside of the bounds of organized medicine. For that reason we cannot give our hearty support, although we are enthusiastically in favor of some sort of lasting memorial to our beloved Gorgas, and believe that a teaching research institution covering the field of tropical diseases, and in Panama, would be most appropriate.

It will be recalled by those who have been following the affairs of medicine for some years, that at one time the American Medical Association appointed a committee to look into this matter. The committee favored a teaching institution as a memorial to Dr. Gorgas, located in the South, although we were personally in favor of a heroic statue to Gorgas at the entrance to the Panama Canal, offsetting a similar statue of Mr. Goethals, the engineer, on the other side of the canal. The movement grew in proportions as we gave it thought, and after the death of Dr. Gorgas there was a distinct revival. For some reason a state of stagnation followed, and other agencies became interested. It seems that somebody decided that the American Medical Association was too slow, and that the movement should be put in other hands, which was done. The plan now put forward was prepared, and the House of Delegates of the A. M. A. was asked to give it the endorse-

ment of that body, which it did, in the following resolution:

"*Resolved,* that the House of Delegates of the American Medical Association, convinced of the great promise which the Gorgas Memorial contains of benefit to humanity through improved knowledge of preventive medicine and tropical disease, and of its peculiar adequacy, as a tribute to our great leader and sanitarian, recommend to the organized profession of the country, through its constituent state and county societies, the enthusiastic support of the project."

It will be observed that this resolution mentions only the institution for the teaching and study of tropical medicine, and that it recommends the project to the organized profession of the country, through its constituent state and county societies, evidently with the idea that there would be a direct connection between organized medicine and the Gorgas Memorial. So far as we can see, there is no such connection.

The plan put forward provides for (1) an institute for research and tropical diseases to be erected in Panama, and (2) the continuous prosecution of a health educational campaign having for its purpose the "elimination of unscientific methods, by developing a coöperation between the public and scientific medicine."

A large endowment fund will be raised for the support of the two projects, all in the name of the Gorgas Memorial. The Government of Panama has promised to provide the grounds and erect the buildings for the research institute. The board of directors of the Memorial will support this institute and organize for the conduct of the educational campaign in this country, under the supervision of a joint lay and medical board, the medical profession being represented on a 75 per cent basis.

There can be no criticism of those in charge of this movement, and of their good intentions. Indeed, there can be no criticism of the movement itself, except for the fact that it owes allegiance to no permanent, deep-rooted organization. Therefore, we can do no more than to express the wish, and the desire, that some provision be made whereby the self-constituted board of directors in charge of the movement be connected with the American Medical Association in such a manner as to give the real medical profession real supervisory authority. We are apprehensive of any educational campaign of nationwide scope, under whatsoever control, and particularly where there is a large lay element to be considered, under the control of a few, selected physicians and laymen, by whomsoever chosen and however high class they may be. The very fact that those in charge entered Texas, without any notification to our organization or connection whatsoever therewith, and at a time when we were straining every nerve to carry on an educational campaign exactly such as that anticipated by the founders of the Gorgas Memorial, and organized a State "Governing Committee," taking from each of those selected the sum of $100, is an evidence of the possibility of misunderstanding and cross-purposes that is worthy of consideration.

We desire to repeat, that it is not our purpose to oppose this movement, but rather to appeal to those in charge to proceed through the channels of organized medicine in dealing with a movement of such scope as this, and of such intimate connection with the life work of those who comprise organized medicine. It is a growing custom, and one to be regretted, for the big men of medicine to become impatient with the slow movements of "organized medicine." It should not be forgotten that we must carry along with us the driftwood in the profession, and for that reason cannot move as swiftly as selected groups may move. The river with rugged banks and much driftwood easily overflows when the current becomes too swift; the river with smooth banks and no driftwood may flow as swiftly as it pleases without danger of overflow.

Dues Are Coming In!—In view of the considerable increase in dues, from $5.00 to $15.00 per annum, which figures out 300 per cent, we are much interested in the process of their collection. A comparison with last year will be illuminating. We learn from several secretaries of state associations where dues have recently been raised materially, that in only a few instances have there been any losses in membership, and then in every case these losses have been more than compensated for in a short time. It seems that the increased efficiency of the organizations has appealed to the membership, and that pride in the organization when it begins really to accomplish something, compensates manyfold for the additional cost. Indeed, it seems that here as elsewhere, cheap possessions are looked upon as temporary, the desire being always to purchase the expensive as soon as finances will allow. It can hardly be said that the increased amount of dues in any of our organizations have approached the prohibitive point. Where we object strenuously, a large part of our objection is incident to resentment of the requirement that we pay more for something that we have been getting for less—or think we have. The truth is, generally, that we are paying more and getting more.

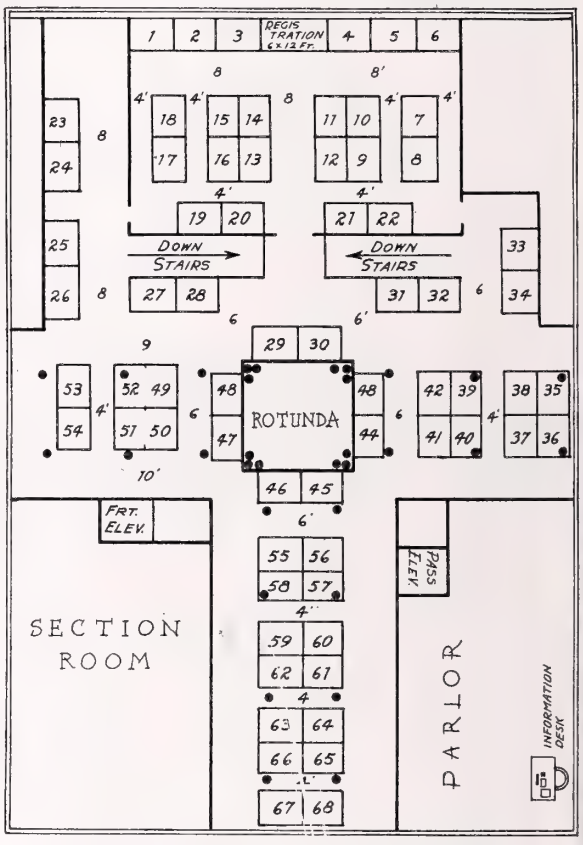
We are not prepared to say, of course, whether our increase in dues has been justified, although we have our own personal

opinion about that, but we do say, emphatically, that whether or not the increase should have been made, it is good sportsmanship to pay now and argue later. This is a democratic organization and our representatives will decide what is best for us, in the light of our desires and the facts as they will be presented to our House of Delegates in Austin next May. And we may say here, that many things will be said there and then that cannot be said here and now. Those who dissent and disagree should reserve their judgments accordingly.

In July (the 28th, to be exact) the Galveston County Medical Society paid dues for 1925, for the following members: Drs. M. L. Graves, N. Adronis and H. P. Cook, all of Galveston. On December 3, the Lampasas County Medical Society paid the increased dues for 1925, for the following members: Drs. H. H. Taylor and E. C. Beaumont of San Saba; F. Boyd Pearce, Izoro; J. E. Wilkerson, D. W. Black, M. M. Landrum, J. Garrett Townsen and W. D. Francis of Lampasas, and O. A. Kirby of Lometa. This society was the first, we believe, to report the election of officers. The secretary writes encouragingly. He says that he experienced no difficulty in securing the dues of the nine of his sixteen members reported, merely by asking for the money, in a business-like manner, in the expectation of getting it, *and right now*. He is justifiably proud of his group—and we hazard the opinion that his little group is proud of him.

Let us urge that in this month of annual meetings, all who can will pay dues, thus getting it out of their systems and thus helping overburdened secretaries and bookkeepers to keep up with the game. Above all things, the county society secretary is not responsible for the increase in dues, and we get nowhere cussing him; and we may observe that the State Secretary is not responsible either, and while he is used to being norated, at this time he would be pleased to feel that everything is lovely and his goat is hanging high.

Next Annual Session, May 5-6-7.—Upon the advice of the Travis County Medical Society, the Board of Trustees have decided upon Tuesday, Wednesday and Thursday, May 5-6-7, for the next annual session, which is to be held in Austin. There has been, and is, some apprehension as to whether the Legislature will be in session during that time. Of course, it would be better to have the decks cleared of the crowds usually present in Austin when the Legislature is in ebullition, but it might be worth the cost in crowding to be there just at that time. In other words, it seems reasonable to believe that we could utilize this opportunity in educational efforts among the members of the Legislature. However that may be, the hotels have agreed to have their rooms ready for use at the time set. The list of local committees will be published in the January JOURNAL, for the advanced information of all likely to



Floor Plan for Exhibits, Austin Annual Session.

be concerned. The arrangements committee realizes that it is going to be quite a task to care for the large attendance we are certain to have, but there is no evidence of doubt as to the ability of Austin to properly care for the crowd. Capable hands are at the helm and strong shoulders at the wheel.

The Driskill Hotel will be Registration Headquarters, and the Stephen F. Austin Hotel, Official Headquarters. We do not quite get the difference, but do understand that the commercial exhibits and registration are to be on the Mezzanine Floor of the Driskill, which most of our readers will remember is quite a roomy affair. It is quite probable that the Section on Medicine and Diseases of Children will hold forth in the dining room on this floor, and altogether the Driskill will be a busy center.

We are much interested in our commercial exhibits, and are reproducing herewith a diagram showing where the registration and

information booths will be, and the layout for the exhibits. If all the exhibit booths are sold, this will be an interesting and no doubt profitable part of the meeting. Our readers are invited to call this diagram to the attention of detail men, that they may pass it on to their respective houses. The booths will, of course, be sold on a first-come-first-served basis. Dr. Summerfield Taylor of Austin, is chairman of the committee in charge, to whom all inquiries should be made.

The scientific exhibits, we understand, will be located on the ground floor of the Stephen F. Austin Hotel. Some interesting exhibits of this character are in prospect. The chairman of this committee, Dr. R. E. B. Bledsoe, of Taylor, will be pleased to hear from any of our readers who may happen to know of material of scientific value which might be secured.

The Southern Medical Association to Come to Texas.—The New Orleans meeting of the Southern Medical Association, November 24-27, proved to be a most delightful affair. The scientific program seemed to more than come up to expectations. It was carried out practically as published. The entertainment features were, of course, quite pleasing. It seems that to few people is given the knack of combining business and pleasure as to the Louisiana born. Indeed, it seems that the admirable qualities of the old South have been concentrated in Louisiana, as the aroma of the coffee bean has been concentrated in the justly famous French drip coffee of that justly famous State.

The registration was the largest in the history of the association, exceeding 1,760 members, 451 ladies and 140 students and nurses. Those were the totals on the second day of the meeting. Of the members registered, 205 were from Texas. We have no knowledge of the number of ladies registering from Texas.

It was a matter of great pleasure and pride to the visitors from Texas, when the announcement was made that the next annual session would be held in Dallas. This decision was admittedly in recognition of the interest taken in the organization by its Texas members, and for the good of the order. This will be the second time we have had the honor of entertaining this organization, its 1915 meeting having been held in Texas. On that occasion, in answer to the opinion of many friends of the association that Texas was too far away, we promised 1,000 new members. The promise was more than kept, and the Dallas meeting was, up to that time, the largest in the history of the organization. We are not aware of any promises made this time, but have no hesitancy in predicting an increased membership from Texas and a largely attended meeting.

Dr. Stewart Roberts of Atlanta, Georgia, who, it will be recalled, visited us at San Antonio last year, was elected president, and Dr. Homer Dupuy of New Orleans, vice-president. Mr. Loranz was, as usual, unanimously elected secretary-manager.

The Woman's Auxiliary.—Some years ago we made strenuous endeavors to interest our women folk in our annual sessions, the idea being at that time that if we could get the women to want to attend the meetings, our registration would be materially boosted. The country having gone almost totally dry, there seemed to be no reason why that expedient should not be resorted to. Our endeavors were surprisingly—and we hasten to say—pleasantly successful. The matter of supplying "visitors" with badges speedily became a problem. Then came the Woman's Auxiliary. Quite probably most of us thought of this organization as rather an aid to our annual sessions than anything else. However, some of us caught the vision and figured a bit in the future. Indeed, the woman's auxiliary idea had become well established among fraternal organizations, and it is readily apparent that of all the combinations of interest, medical societies offer the greatest scope for the activities of women. The movement among medical societies, while it did not actually originate in Texas, perhaps had its greatest impetus here, and we are quite proud of the fact that this is true, and that a Texas woman, Mrs. S. C. Red, of Houston, is now serving for the second time as the president of the national organization, and that a Texas woman, Mrs. E. H. Cary, of Dallas, is now president of the auxiliary of the Southern Medical Association. We believe Mrs. Cary was the first president of the Texas Auxiliary. The movement is growing by leaps and bounds, and it behooves us to consider at this time just how it is to be utilized to the best advantage.

While the auxiliary has its own constitution and by-laws, and its own organization and a policy, it remains in name and should remain in fact, the champion and aid of the State Medical Association in all of its endeavors, except possibly those of a strictly medical and scientific nature. Sometimes we forget that. The fact that there are two separate and distinct organizations is likely to mislead us. As a woman's organization, the auxiliary takes its place in the Federation of Women's Clubs, and has its own distinct sphere of action outside of that of the medical organization, but its principal purpose should be to support the medical profession in such of its endeavors as may seem desir-

able. It must not for a minute be thought that the auxiliary should do our bidding, whether or no, and without recourse. If that were true, they might as well be an actual part of our organization, without the right to vote. On the contrary, the auxiliary should approach our problems from its own angles, support without question those which they consider worth while, and discuss with us policies concerning which they are in doubt or with which they find themselves in disagreement. Thus we will have an intelligent supporting body rather than a subservient group. That is best.

The real question is, how can the two organizations coördinate their activities and come to agreement in the matter of policy? It is not practicable for the auxiliary to meet with us or for us to meet with them. Most of the discussions in each body would be of no interest to the other. We can, however, establish *liaison* as is done by troops in battle. When two regiments go into action side by side, there is at the headquarters of each regiment a group from the other regiment, the duty of which is to keep track of what is going on and keep its own regiment informed, so that commanders are not distracted by the additional duty of conveying detailed information to other than their own commands. The liaison group has no other responsibility than to keep track of what is going on and inform their respective units. A committee from a county society could sit in the counsels of the auxiliary, and *vice versa*, without the right to vote, of course. Thus there would be at hand the information needed at the time, and thus would be gathered information likely to be required by the other organization later on. The plan seems entirely feasible, but it must be operated upon positive agreement and thorough understanding by each group, else misapprehensions and misunderstandings are likely to arise.

Recently the executive board of the State Auxiliary endorsed the proposed policy of its president, Mrs. J. O. McReynolds, of Dallas. It was decided to make the special purpose of the organization for the year, a statewide campaign for pure milk and pure water. This is peculiarly a field for women. They have to do more intimately with these necessities than do men, and can approach the public in all good faith. It was decided to make every effort to bring *Hygeia* to the attention of the lay public, and for that purpose a publicity campaign chairman was appointed. The legislative and publicity program of the State Medical Association was also endorsed, and the co-operation of the auxiliary promised. This would appear to be a good program, and we trust it will receive the hearty support of our organizations.

The JOURNAL will publish brief synopses of the transactions of local auxiliaries, if they are furnished while the matter included is news. If these reports assume proportions, quite probably the trustees will authorize a department in the JOURNAL for their accommodation. We are not overly anxious to find new worlds to conquer, not having conquered the county medical societies yet, but we will be pleased to be the medium for the spread of news of interest to our readers. Perhaps we may aspire to the favorable consideration of the ladies.

A Health School for Sanitarians was held in Houston, November 5-8, both dates inclusive, under the auspices of the Texas Association of Sanitarians, the City Health Department of Houston, and the Texas State Board of Health. This was the second effort of this sort, and from all reports it was a pronounced success. Numerous and most interesting papers were read, and the discussions were quite general and of considerable importance. The subjects covered were those most intimately concerned in the health work of municipalities and counties of the State. The attending health workers were not all physicians, and there were many laymen in attendance who had only a general interest in health matters.

The movement to reorganize the State Board of Health on the basis advocated by the State Medical Association was endorsed, and the matter referred to a strong legislative committee for action. It was the unanimous opinion of the conference that the State Board of Health should, as far as possible, be removed from politics, and that the term of office of members of the board should so overlap as to permit of a continuing policy. It was also decided that the Board of Health should employ the State Health Officer.

The following officers were elected for the ensuing year: President, Dr. A. H. Flickwir, Houston (re-elected); vice-presidents, C. C. Hays of Waco, C. S. Bosshardt of San Antonio, L. O. Bernhagen of Beaumont and Dr. Hubert Shull of Texarkana. Mr. E. G. Eggert of Austin, remains secretary.

Merry Christmas
and a Happy New Year!

ORIGINAL ARTICLES

TUBERCULOMA OF THE SPINAL CORD.*

BY

TITUS H. HARRIS, M. D.,
and
GIBBS MILLIKEN, M. D.,
GALVESTON, TEXAS.

The limited number of cases of tuberculous inflammation resulting in the formation of a solitary tubercle, is perhaps sufficient reason for placing on record the clinical and pathological findings in a case that came under our observation in the Medical service of John Sealy Hospital in March, 1923.

An involvement of the substance of the spinal cord itself in a central tuberculous myelitic process, independent of meningeal tuberculosis, may well be considered among the more infrequent conditions.

Thalheimer[1] and Hassen in 1922, in an exhaustive review of the literature, reported finding 67 cases which appear to be definitely proven cases of solitary tubercle of the cord. They contributed an interesting article on a case of the kind observed by them, together with a general discussion of the subject. In the presentation the authors stated, "It is generally admitted that so-called solitary tubercles of the brain and spinal cord are usually, if not always, associated with tuberculous meningitis." It is further contended that only in rare instances is the substance of the cord involved in a tuberculous inflammation of its meningeal coverings, and that when such involvement does occur, it is by direct extension, or that both structures, meninges and parenchyma, are simultaneously involved by the tuberculous process. Bassoe[2] states that nearly all cases of solitary tubercle of the spinal cord are due to infection of the interior of the cord by way of the blood stream. We think we will be able to show from the postmortem findings in our case, that the infection reached the cord by this route, with the development there of a focus of tuberculous inflammation entirely independent of and apart from any similar process in the meninges, vertebrae, or other neighboring tissues.

Clinically, our case adheres to the symptomatology outlined by Bassoe: "The onset is usually with pain, paraesthesias and weakness of one extremity, rapidly spreading to the other side, so that the picture of a transverse lesion is produced."

CASE REPORT.

J. G., male, negro, aged 54 years, was admitted to the John Sealy Hospital, November 8, 1922, complaining of pains in the side of his chest, in his arms, and in both knees. The family history and past history was negative for tuberculosis. He had had gonorrhoea several times and a chancre fifteen years before and had taken no antisyphilitic treatment. The patient had had pains in his legs and knees for the past ten or twelve years, but more recently other joints had become involved. For the past year or two he had been conscious of constant pains of an aching character in the knee, ankle and shoulder joints.

Examination upon admission revealed enlarged and tender joints which crepitated on passive motion. Examination of the heart, lungs and gastro-intestinal tract was negative. His pupils were equal

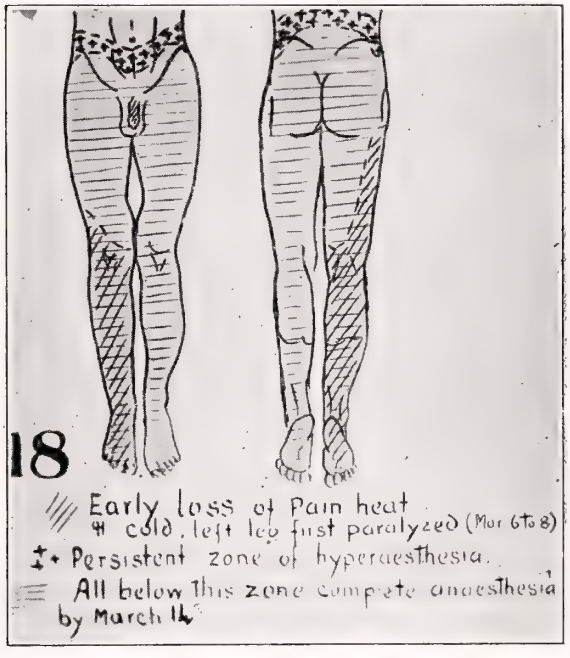

18
Early loss of Pain heat
& cold. left leg first paralyzed (Mar 6 to 8)
Persistent zone of hyperaesthesia.
All below this zone complete anaesthesia
by March 14

FIG. 1.—Schematic Drawings, Showing Areas Affected by Cord Lesion.

and reacted well to light. The patellar reflexes were slightly more active than the normal. There was no sensory disturbance detected. The blood pressure was systolic 132 m.m. Hg. and diastolic 84 m.m. Hg. His urine contained a small amount of albumen. His blood Wassermann was negative.

Application of heat was used over the joints and the patient was allowed to go about the ward. His condition remained about the same until February 18, 1923, when he complained of pains in the left lower lumbar region, and anterior and lateral aspects of the thigh. He described the pain as being shooting in character. This continued, and little was thought of it until on March 6, he began having difficulty in emptying his bladder.

The following day there was a flaccid paralysis of the left leg with the exception of the flexors of the foot and toes. All movements were possible in the right leg but there was considerable weakness.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 29, 1924.

1. Thalheimer, Wm., and Hassen, Geo. B.: "Clinico-Pathological Notes on Solitary Tubercle of the Spinal Cord," Nervous and Mental Diseases, vol. lv, p. 161, 1922.

2. Bassoe, Peter: "Conglomerate Tubercle of the Cord as a Complication of Visceral Tuberculosis," Arch. Int. Med., vol. xxi, p. 519.

There was complete anesthesia below the knee on the right side, and pain, heat and cold were impaired over the thigh. There was no sensory disturbance over the left lower limb except a loss of vibratory sense. The patellar and Achilles reflexes were absent on the left. The cremasteric was present on both sides.

The following day, March 8, the sensory condition was little changed on the right side, but there was some interference with the sensations of pain, heat and, cold on the left side. The left leg was now completely paralyzed and only a few movements of the toes on the right side were possible. The right knee jerk was now very sluggish. All of the muscles showed a complete loss of tone. The sphincters were partially relaxed and there was constant dribbling of urine. Several large blebs had appeared upon the dorsal and medial surfaces of the feet. These were filled with clear fluid. They appeared over night and were very symmetrically placed. The patient was running a mild temperature varying between 99.0° and 100.2° F. His blood count showed no change from the normal. His spinal fluid was clear and acellular, with a normal globulin content, negative Wassermann, and negative Lange's Colloidal Gold Test.

The course of the disease was a progressive one. On March 17, eleven days after the bladder disturbances started, there was a complete flaccid paralysis of both legs with loss of bladder and rectal control, and complete anesthesia below the twelfth dorsal skin area. The skin areas of the eleventh and twelfth dorsal segments were hyperesthetic. All reflexes below the level of the first lumbar segment were absent. Soon the patient began running a septic type of temperature and a progressively downward course. A supra-pubic drainage of the bladder was done in an effort to clear up a severe cystitis. This seemed to do no good, and the patient died May 14, 1923.

The clinical diagnosis of transverse myelitis of unexplained etiology, was made.

An autopsy was performed by Dr. Milliken on May 15, 1923, and the following findings were recorded:

External Description: The body was that of a somewhat emaciated colored man. Superficial loss of tissue was marked. Trophic ulcers were seen over the medial malleolus of the right leg and over the lateral malleolus of the left leg. There was a large ulcer over the sacrum. There was a supra-pubic wound in which a catheter was held in place.

Thorax: The pleural cavities did not show changes from the normal. The lungs were slightly more voluminous than the normal organs and on section revealed, in addition to an excess of blood in the posterior parts of both upper and lower lobes, many small grayish areas about .5 cms. across. These areas, more numerous and larger in the dependent portions of the lungs with the body in the recumbent position, were slightly raised above the surrounding lung surface. The heart showed post-mortem thrombi in the auricles and slight chronic thickening of the cusps of the mitral valve.

Abdomen: There was slight enlargement of the spleen and on section small yellowish gray areas were found scattered all through the organ. These areas were irregular in size and outline, the larger ones measuring about .5 cms. in diameter.

The kidneys showed a moderate increase in size. Their capsules stripped easily, leaving a smooth surface and on section, an increase in the width of the cortex was seen. The adrenal glands showed post-mortem softening but no other changes. The liver did not show any gross changes and the stomach, pancreas and the intestines appeared normal.

Pelvic Organs: The urinary bladder presented evidence of an inflamed condition of its walls and the cavity contained a small amount of puriform fluid. A suppurating tract was found leading from the supra-pubic wound into the anterior pubovesicle space, which was found filled with purulent exudate. The neighboring structures presented the change belonging to an inflammatory infiltration.

The Brain and Spinal Cord: The gross examination of the brain did not reveal any pathology. Except for a beaded appearance of the posterior nerve roots leading into the first lumbar segment of the cord, external examination was that of a normal cord and meninges. Upon section at this level, a yellowish gray area, occupying the deeper parts, measuring 6 m.m. in diameter was seen. Surrounding this mass there was what appeared to be on gross examination a narrow rim of normal cord substance.

FIG. 2.—Tuberculoma of First Lumbar Segment of Spinal Cord.

Sections of the cord through the above described lesion, showed a central area of caseous necrosis surrounded by a zone occupied mainly by small spheroidal cells, a much smaller number of large polyhedral cells, some fibroblasts and an occasional giant cell.

This solitary tubercle was found surrounded by partly degenerated cord tissue. In some of the sections the small spheroidal cells (lymphocytes) could be seen extending by a narrow line into the posterior nerve roots on one side. None of the other cells so common in tuberculous inflammation were found in the sections of the posterior nerve roots. Sections of the cord above and below the lesion showed the replacement gliosis of a secondary ascending and descending degeneration of the nerve tracts.

ANATOMICAL DIAGNOSIS.

1. Solitary tubercle of the spinal cord (central tuberculous myelitis.
2. Tuberculous splenitis (Fibro-caseous lesions).
3. Purulent cystitis.
4. Lobular pneumonia (Terminal).
5. Acute diffuse nephritis.

Correlation of the clinical and anatomical findings points to the conclusion that although, in all probability, the primary focus of tuberculous disease was not discovered, the first clinically detectable signs of the condition were dependent upon a central tuberculous myelitis. Perhaps the most interesting individual feature in connection with the clinical aspect of the case consists in the rather sudden onset of symptoms, pointing to an acute transverse myelitis. At the time of the development of symptoms of myelitis, this patient was well nourished and presented no symptoms suggesting tuberculosis.

CONCLUSIONS.

1. Tuberculosis of the spinal cord may occur in the form of a central tuberculous myelitis, without meningeal involvement.
2. The infection in such cases reaches the cord by way of the blood stream.
3. The usual symptomatology is pain followed by paresthesias and weakness, and later, paralysis of one extremity, rapidly spreading to the other side, producing symptoms of a transverse lesion.
4. A diagnosis of tuberculoma of the spinal cord is justified in the absence of recognizable tuberculosis elsewhere.

ABSTRACT OF DISCUSSION.

Dr. James J. Terrill, Dallas: There is not much that can be added to the discussion of this paper. Not many cases of tuberculoma of the cord are recorded in the literature. It would be impossible to make a definite clinical diagnosis of this condition. It must continue to be a post-mortem diagnosis. A diagnosis of transverse myelitis can be made, but to be sure that this is due to tuberculoma would be almost impossible. The symptom of pain is important and where this is definitely present, one should keep in mind a beginning transverse myelitis.

Dr. Lee Rice, San Antonio: I had the privilege of seeing the necropsy of this case, and, although a diagnosis of transverse myelitis had been made, and the level had been located, it was impossible to find the gross lesion. Dr. Wm. Keiller held the cord for several days, and close observation failed to reveal the tubercle until the cord was actually sectioned. It was then found to be a nearly round tubercle at the level indicated before death. The condition is somewhat rare, but I believe 182 cases have been reported, Dr. Stout having added another in his paper before the Pathological Society yesterday. Mallory thinks that tuberculomas in the central nervous system become round, or nearly so, because the resistance of the tissue is low, and at the same time, equal on all sides.

Dr. E. W. Applebe, Houston: From the history and physical findings a diagnosis of transverse myelitis would be made in cases of this kind. Another diagnosis which might be made is myelomalacia. Our attention has been invited to the rarity of the disease. Osler mentions this. Hinkler reports 3 cases in his own experience and reviews 24 cases in the literature.

Dr. Wm. Keiller, Galveston: I regret not being here to hear all the paper. The spinal cord in this case, to me, was a very interesting specimen. I would have defied any one by looking along this cord before sectioning to have found anything wrong. It was only on microscopic examination that the lesion was detected. Those who diagnosed clinically the location of this lesion are to be congratulated. The lesion was found at the exact point located by the clinicians. This condition may be spread in the posterior nerve roots, and some enlargement of the posterior nerve roots suggests that there must be lymphatic drainage of lymphatic spaces out by way of the posterior nerve roots. I want to emphasize the importance of complete autopsies in these cases.

NEURO-RETINITIS WITH CASE REPORT.*

BY

W. MOOD KNOWLES, M. D.
DALLAS, TEXAS.

The term "Neuro-Retinitis" is used in connection with the following case reports because we cannot conceive of an inflammation of the retina which remains strictly confined to it, but rather it spreads and implicates the head of the optic nerve as well. Likewise the same term is applicable when the inflammation starts in the nerve head and passes to the retina.

Etiologically, neuro-retinitis is never considered as a disease entity, but simply as the symptom of an internal or general disease, and the ocular manifestations are often the first indication of its presence and lead to the discovery of the general disease. Aside from brain diseases which will not be considered in this paper, I believe syphilis should be given first place as as cause, and probably albuminuria second. Then come the acute infectious diseases, of which measles probably holds first place, and finally, chronic toxemia from infected teeth, tonsils, sinuses, gallbladders and prostates.

These patients usually come to the oculist complaining of a cloud before their eyes and inability to see details, or, rarely, a feeling of fullness or tightness in the eye itself. Vision is actually reduced in proportion to the extent and intensity of the inflammation, and is due not only to the changes in the retina itself, but also to opacities in the vitreous caused by exudates from the retina. Ophthalmoscopic examination shows these opacities floating in the vitreous, also a cloudiness, haziness or wooliness of the retina. This is usually more marked in the region of the macula and disc, the margins of which become indistinct instead of clear cut and well defined. The blood vessels are distended and tortuous, and may show extravasation of blood.

CASE REPORTS.

Case No. 1.—Mrs. H., aged 32, married, mother of two normal children, had had no serious illness of any nature until the last eighteen months, during which she had been treated at intervals for nervousness. Two blood Wassermanns were negative and the urine was negative. When first seen by me, Feb. 21, 1924, she complained of dull ache in her right eyeball. She said, "my eye feels too large and as though it would pop." She thought it had been this

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, April 30, 1924.

way for three or four months, but had been told that there was no trouble with eye. Finding no external evidence of pathology, and knowing that the patient was somewhat inclined to exaggerate her trouble, I also told her that I thought the eye was normal. About 10 days later, there developed a slight cloudiness of vision, and the fundus examination showed a swollen nerve head, very poorly outlined and the veins somewhat distended and tortuous. Her vision was 20/30, and the field was reduced approximately 15 degrees. Physical examination revealed nothing except considerable pyorrhea. Radiographs showed the sinuses were clear but that two teeth had apical abscesses. These teeth were removed, and treatment to the gums was instituted, and the full, aching feeling in the eye at once subsided. An examination one week later showed the fundus to be almost normal, and although the vision was still 20/30, the cloud had disappeared from the vision and the field was normal.

This case definitely illustrates a fundus lesion originating from infection around the teeth, the removing of which has not only relieved the eye condition, but the patient is decidedly improved and is much less nervous. It also emphasizes the fact that you can't be too thorough in your first examination, no matter how insignificant the symptoms may appear.

Case No. 2.—A. A., female, aged 5, had had measles the first week in January. Four days after the rash had disappeared the child awakened one morning and could not see. The mother thought the blindness was complete. Examination two days later showed widely dilated pupils with no reaction to light and the vision nil. The fundi showed moderate hyperemia, the nerve heads also being mildly hyperemic, but not swollen. The disc margins were indistinct. On the third day 150 c.c. of blood were drawn off, and 300 c.c of whole blood were transfused from the father. Saline purges were given and a little later potassium iodide. At the end of ten days there was light perception, with sluggish pupillary reaction. I have recently learned by letter that the vision gradually improved to somewhat less than normal, but I have not had further opportunity to test it or to examine the fundi.

Case No. 3.—Mrs. C., aged 70, consulted me, March 2, 1924, for loss of vision in the right eye. Her vision had suddenly been lost on the previous day, only peripheral vision remaining and that for moving objects only. Examination showed numerous retinal hemorrhages, especially in the maculo-papular region, white patches more distant, and all vessels swollen and engorged. The left eye was apparently normal. She was referred to her family doctor with a tentative diagnosis of retinitis albuminuria, which subsequent examinations proved.

This last case is cited to stress its importance both from a diagnostic and prognostic standpoint. While there is no really typical fundus picture that distinguishes albuminuric retinitis from other forms of retinitis, still it is more typical than any other form. Even so, every fundus lesion should call for a careful examination of the urine. From a prognostic standpoint this is important, because it is a matter of general experience that this complication forewarns a beginning of the end.

ABSTRACT OF DISCUSSION.

Dr. N. H. Bowman, Waco: No fundus examination in neuro-retinitis could reveal any lesion other than a gross lesion. Only a color-field test would reveal the lesion. Here you get evidence that you would not obtain from the ophthalmoscope. You get the axis cylinders involved with red and green fields. With the rod and cones involved you get the blue. I think it is of great importance not to depend in early cases on the use of the ophthalmoscope. You must go further.

With regard to focal infection, trouble external to the pulp of the teeth may produce typical focal infection; but when there is a pulpitis, your patient may have an infection of the trifacial tract. You should deal with all cases of neuro-retinitis early, just as you would with early tuberculosis. You do not wait for "bugs" or cavities in the latter. The presence of neuro-retinitis should be determined as early as possible, so it is important to make the functional test.

Dr. E. H. Cary, Dallas: Albuminuric retinitis is often considered a terminal kidney lesion. I used to think of the findings as a part of the kidney picture, but depending upon the kidney lesion. I wish to report the case, however, of a young boy, 14 years of age, with a typical case of albuminuric retinitis, and yet the urine showed nothing. The toxemia which brings about an albuminuric retinitis is often late in affecting the kidney, and can produce a retinal lesion before any kidney lesion shows itself. I did not know just what to do for this young fellow. He had enlarged tonsils, so I took them out, and a thing happened which I have observed several times. This boy had a distinct exudate between the capsule and the aponeurosis, and the infection was staphylococcic. The retinitis rapidly subsided.

Dr. Wm. Lapat, Houston: In many cases of neuro-retinitis the etiological factor cannot be found. If a man presents himself with the history of sudden failing of the vision of one or both eyes, and after our examination we are unable to find the reason of this poor vision, we naturally plot his fields, as often the first sign of a beginning neuro-retinitis is a marked change in the field.

We should guard against thinking that every neuro-retinitis of which we can find no cause, is due to a hyperplastic sinus infection. Some time ago Dr. Cushing wrote a timely paper in which he reported many cases of sinus operation for neuro-retinitis in which the sinuses were not at fault.

We had a patient who suddenly lost the vision of one eye. The eye showed a severe neuro-retinitis. After a complete examination by an internist, all that could be found was enlarged tonsils. The Wassermann was negative. The patient was advised to have a tonsillectomy, but this was refused. She was given ten drops of KI t. i. d., more as a placebo than anything else. The vision then in the right eye was fingers at three feet. She returned in a week and her vision was 20/40; in two weeks it was normal and the retinitis had cleared up. Had we removed her tonsils when we first saw her, we would have reported "A Case of Neuro-retinitis With Blindness Cured in Two Weeks by Tonsillectomy." We jump at conclusions too fast, if not careful.

Dr. John O. McReynolds, Dallas: Dr. Knowles has in a very interesting way presented a subject of extremely wide scope. This subject embraces so much that is difficult to discuss the cases reported, which apply to different types of the condition. It is important, from the standpoint of treatment and prognosis, to arrive at a very accurate idea of the cause. In the case of the little girl with a suddenly developed loss of vision, one would think of the predominance of a toxic factor. And in such a case with rapid elimination of the toxic factor and without marked changes in the fundus, we would expect a good result because the recuperative power of such a patient would be good and the actual destruction of the tissue in the fundus would be small. Consequently the outlook would be correspondingly good.

With reference to the old lady, she evidently had a case of advanced arterio-sclerosis with retinal changes similar to changes in other parts of the body. Here you would have vascular changes similar to those in the brain, occurring at the same time or later, because the retinal vessels are quite similar to the cerebral vessels. While we may for a short time get a marked improvement in the vision, it may be evidence of an impending cerebral complication. I have many times seen a hemorrhagic retinitis very soon followed by a cerebral hemorrhage. Lately, I had a patient with marked retinal hemorrhages. After a few months his vision improved up to 4/10, and I dismissed the patient. That very day he ran upstairs to see a man on some important business and developed a cerebral apoplexy and died within a very few days.

It may be well in this connection to say, with reference to the focal infections, that we would naturally think that our ocular lesion would be on the same side as the sinus infection. It is important, however, for us to remember that there is no necessary connection between the side of infection and the side of involvement.

Dr. Knowles (closing): I appreciate the free discussion, but I am sorry you avoided discussing the case due to measles, because I wanted to learn something about this as a cause, and what to expect as to prognosis. I am sorry, also, that you did not discuss transfusion. The effect of neosalvarsan on optic neuritis is as yet undetermined. The question arises as to whether such injections help or exaggerate the condition; in other words, whether the neuritis is the result of the disease or the medication. I believe it is due to the former.

X-RAY TREATMENT OF CARCINOMA OF THE UTERUS.*

BY

R. T. WILSON, M. D.,
TEMPLE, TEXAS.

The uterus is the organ most frequently involved in carcinoma, and carcinoma is unquestionably the most frequent tumor of this organ. Any means, methods, or measures, which have proven or promise to prove of value in combating this disease, deserve, therefore, the careful and unprejudiced consideration of all physicians who are responsible in anywise for the care and guidance of these unfortunate women.

The great majority of these patients are mothers, and the average number of children borne is five. The average age is in the fifth decade of life. Visualize the home, the wife sick with this dread disease, 40 years of age, mother of five children ranging in ages from 16 years down, and you have at a glance the economic, sociologic, and even the moral hazards involved, the solution of all of which depends to a very large extent upon the solution of the doctor's problem, namely, the successful treatment of the disease of the mother.

When it is remembered that this disease is often so insidious in its onset, giving no alarm or evidence of its approach until well established or even well advanced; that even when discovered and treated in its incipiency, it carries such a high mortality rate; and that from the earliest history of medicine every conceivable means has been employed and all have been disappointing in their results, we begin to feel that we are dealing with a well nigh hopeless problem.

Philanthropic and scientific minds have conceived the idea of spreading cancer propaganda and educating the laity as to the nature of this disease and especially its early recognition. Cancer sufferers have derived great benefit from this cancer campaign, for early recognition and thorough and sane treatment offers the greatest hope in this great group of cases.

Since the discovery of *x*-rays in 1895, there has been an intensive campaign of investigation both by physicists and physicians seeking to discover the real nature and properties of these unknown rays, that their virtues might be known and utilized to the best advantage in relieving human suffering. It has been found that those rays emanating from tubes which are excited by higher voltage currents are of shorter wave-length and therefore more penetrating. The Coolidge tube, invented in 1914, and the higher voltage transformer, perfected since that time, have made possible the greatest progress in this line. It has also been found that by increasing the thickness and consistency of the filter those *x*-rays of longer wave-lengths were filtered out, and thus the more penetrating rays were separated.

Again, the longer wave-lengths are more rapidly absorbed by the skin and are the ones which produce the greatest damage to the same. Thus by increasing the voltage of the machine, increasing the filter, and lengthening the distance of the tube from the patient, we obtain much better dosage to the deeper tissues and much less damage to the surface. Paradoxical as this may seem, it is nevertheless true. The most modern *x*-ray equipment is now capable of producing *x*-rays which more closely approach in wave-length the Gamma rays of radium, but have the distinct advantage of possessing very much greater penetrability. So that the great problem which has so long been an obstacle in the way of better *x*-ray therapy, is now approaching a solution, namely, that sufficient dosage can be applied to a considerable depth without damaging the skin through which the rays must pass.

The amount of exposure required to produce a well marked erythema on the skin is known as an erythema skin dose, and this is

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924.

taken as the unit of normal tissue resistance, and for convenience of calculation is called 100 per cent. Cancers require 90 to 175 per cent of an erythema skin dose, most of them more than 100 per cent. When we remember that to apply 100 per cent of an E. S. D. to the surface means that the tissue beneath will receive 90, 80, 60, 40 per cent. and on down as the depth increases, it is obvious that to deliver 100 per cent. or more to a deep tumor, such as one of the uterus, more than one port of entry must be used, the number depending on the size of the patient, the depth of the pelvis and the dosage desired. When more than 130 per cent. of an E. S. D. is applied to the bladder and rectum unpleasant results may follow, hence careful calculations must be made to prevent overexposure to these organs. When radium and *x*-rays are used in combination, there must not be a full dosage of both, but careful allowance must be made so that the combined dosage will not exceed the normal limit of 130 per cent., or else that at least 30 days' time should elapse between the two treatments. Probably the ideal is more nearly approached when somewhere between 1,000 and 2,000 mg. hrs. of radium is used in the cervical canal and all the *x*-ray therapy permissible is applied immediately following. This gives a more nearly homogeneous radiation where most needed; whereas if more radium is used, there is little advantage, because these rays are effective only from one to two inches distant. It would then be necessary to materially reduce the dosage of the *x*-rays to protect the bladder and rectum, thereby securing an uneven distribution of the absorbed radiation through the pelvis.

The uterus and especially the cervix has a liberal supply and free anastomosis of lymph channels. This fact probably explains the early and extensive metastases in uterine carcinoma, and that, in turn, the high mortality rate. Therefore, our hope for successful treatment depends upon early recognition and thorough radiation, not only of the local lesion *but of the lymph nodes as well,* and this combined where practicable with radium inside the uterus or cervix, and the cautery locally in selected cases. The cautery, of course, only destroys where locally applied and radium rays only penetrate a very limited distance and hence do not sufficiently ray the lymph-nodes of the region. It therefore seems imperative that, regardless of the type, the location or the extent of the carcinoma of the uterus, very thorough radiation must be given. This statement applies with greater force to those of the cervix because they metastasize more quickly and extensively.

While it is not the province of this paper to undertake a discussion of the types of cases which may be operable, that is, cases in which local cauterization or complete hysterectomy may be done, suffice it to say that there is a general tendency to conservatism on the part of surgeons in recent years. Perhaps all are agreed that too careful a classification cannot be made and that caution must be used to differentiate these tumors as to location, whether arising in the cervix or body of the uterus, as to morphology and cytology of the lesion, and as to the extent of involvement. Some surgeons claim that carcinoma of the cervix of any type is better left to radiation therapy than subjected to any kind of surgical interference, with the exception of the application of the cautery in selected cases where the local lesion is accessible, and then only with a minimum amount of trauma. Be that as it may, the place of radiation in the fight against cancer is now well established and, with the improved technique of recent years and the thorough and proper combination of this agent with radium and cautery, the nearest approach to our solution of the problem of cancer therapy has doubtless been reached. Early diagnosis, accurate classification and thorough application of these agents, give promise of improved vital statistics in this disease in the years just ahead.

In a given case of carcinoma of the cervix, in which the diagnosis is established or even doubtful, the plan of procedure in our clinic is about as follows: After frozen section diagnosis, local cauterization, and the application of radium, if these be deemed advisable, the patient is referred to the *x*-ray department and the *x*-ray treatment is begun in 3 to 10 days, depending upon the amount of work already done and the general condition of the patient. The pelvis is carefully measured with a pelvimeter (outside measurements antero-posteriorly and laterally), thus arriving at an approximate depth of the tumor from the surface. Then with distribution charts calibrated from our own transformer, we calculate the amount of radiation which we can apply to that depth anteriorly, posteriorly, laterally, and sometimes, if necessary, perineally, being careful as above stated to subtract an amount equivalent to the percentage of radiation which has already been applied to the rectum and bladder by the radium. One thousand mg. hrs. of radium in the cervical canal will deliver approximately 25 per cent. of an E. S. D. to the posterior wall of the bladder and anterior wall of the rectum. One hundred and thirty per cent. being about the limit of safety for these organs, it is necessary to make allowance for

that amount so that ulcerations and fistulae may be avoided.

From our own experience, we are convinced that the best plan of administration is one port of entry every 24 to 48 hours until the full dosage has been applied in 3 to 5 sittings, ranging in length from 60 to 120 min., each depending on the size of the patient's pelvis and the dosage desired. A few patients have considerable radiation sickness, that is, loss of appetite, nausea and vomiting, resulting from absorption of protein which is liberated in the tissues by the radiation. By the use of laxatives, fruit juices, inhalation of perfume and aromatic spirits of ammonia, and allowing 24 to 48 hours between exposures, they are given an opportunity to react and the severity of the sickness is less marked. Fairly large ports of entry, which are regulated by the use of lead diaphragms interposed between the tube and patient, and which range in size of opening from 3 to 6 inches in width, and 4 to 9 inches in length, are used so that no gland in the entire pelvis may escape untreated, if possible. This series of treatments is repeated in 30 to 60 days and again in 60 to 90 days, lengthening the intervals according to the type of lesion, the amount of absorbed radiation and the progress and general condition of the patient.

The patient is kept under close observation, frequent clinical examinations, blood counts, and *x*-ray examinations of pelvis and chest being made, so that if unfavorable signs occur they may be detected as early as possible and appropriate treatment begun. We are not content to give one series of treatments and quit, but believe much better results are obtained by repetition of the dosage. There is much evidence to prove that the cells which are in the most active stage of reproduction or mitosis are the most easily affected by the rays, and so by treating at intervals we get the most profound effect upon one group of cells at this time and another group at another time. Our hope and aim is to thus destroy all actively reproducing cancer cells or transform them into fully differentiated cells and stop their reproduction, to more effectively occlude the terminal blood vessels, reducing the blood supply of the tumor, and to block the lymph channels until the retrograde changes in their succession have either changed the entire lesion from an actively growing cancer to a mass of fully developed fibrous tissue, or at least brought the tumor to a quiescent stage.

In conclusion, we do not believe that *x*-ray therapy should be substituted for surgery in the treatment of carcinoma of the uterus, but after the surgeons have done everything possible in their line of endeavor, there is still plenty of work left for the roentgenologist. We believe it is impossible to overemphasize the importance of thorough and intensive *x*-radiation with highly penetrating rays of the pelvis of every patient, covering the primary focus of disease and the entire lymph drainage. After the cases have been carefully classified and all the removal performed consistent with good judgment and based on the nature and extent of the disease, and after radium has been scientifically applied where indicated, then with few exceptions, if any, should *x*-ray be given. In other words, every patient should have the benefit of the high voltage *x*-ray therapy used along or, in properly selected cases, in combination with radium or with the cautery or with both. It is our humble judgment that in the light of our present knowledge of this subject our greatest hope for the improvement of the mortality rate in this disease lies in this method of treatment.

ABSTRACT OF DISCUSSION.

Dr. Chas. L. Martin, Dallas: I was very glad to hear Dr. Wilson advocate a combined radium and *x*-ray technique, since we have used that method during the past four years in treating approximately 100 cases of cancer of the cervix at Baylor Hospital in Dallas, and have made no changes except the substitution of the higher voltage copper filtered *x*-rays for the less penetrating type. It is our feeling that much better results are obtained in this way than with deep *x*-rays alone and with less danger to normal structures. Dr. Wilson has also advocated the use of surgery, but the necessity of surgery in these cases now seems somewhat doubtful. The Mayo Clinic has recently shown that no cancer cells can be found in uteri removed after thorough radiation for early cancer of the cervix, and since statistics show that surgery is certainly not indicated in the borderline and late cases, carcinoma of the cervix now seems to fall almost completely into the field of the radiologist.

We have been particularly interested in the type of recurrence that the well advanced radiated cases show. All the symptoms usually clear up rapidly under treatment and the patient progresses nicely for a year or more. Then she returns to the hospital complaining of what she calls rheumatism, that is, pain in the hip, back and groin on one or both sides. A speculum examination shows nothing abnormal, but a rectal examination reveals a definite thickening in the parametrium on the affected side. This is often accompanied by a stricture of the ureter, which we believe to be responsible for much of the pain and which usually produces the fatal outcome. We are now attempting to design suitable radium applicators and develop a cross-fire *x*-ray technique that will take care of the parametrium as well as the original lesion. Until this is done, the percentage of five-year cures will not be exceptionally high.

Dr. M. W. Sherwood, Temple: This subject covers such a large field that a scientific discussion that will cover it also is hardly possible. The dosage given is the result of Dr. Bailey's original bomb method. Those who have 100 mg. of radium can get the same results as those who have a larger amount and use the bomb method. We have used our radium in tubes. The effect of the radium is on the neucleus

or reproductive part of the cell and not upon the cell protoplasm. Schmidt claims that a patient that is radiated heavily will develop a vaccine which will produce an immunity, and will even protect animals. In operative treatments we do not use any cutting instrument but the cautery knife. We don't know of any others who are using our exact technic. After the growth is removed with cautery the patient is treated with radium and *x*-ray. The Mayo's use small doses of radium for 3 to 5 days, using up to fifteen or twenty thousand. The best technic will be eventually worked out. The findings of the Mayo Clinic as outlined by Dr. Martin are of great value. Mayo used to hysterectomize all cases.

Dr. Wilson (closing): I want to thank you for the liberal discussion. You will observe we have little to say concerning results, because results of carcinoma therapy are of little value unless they cover a period of years, but judging from the immediate effect we believe that the combined method of cautery, radium, and high voltage *x*-rays will materially improve the statistics in this disease. Early diagnosis, accurate classification and radical use of indicated treatment offers the greatest hope. We should not refuse some kind of treatment, even in late cases, because we can expect relief or amelioration of pain, reduction of hemorrhage promotion of general comfort and prolongation of life. On account of early and extensive metastasis, the pelvis of every one of these patients should have deep *x*-ray therapy.

RENAL CALCULUS.*

BY

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and
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It is our purpose in this paper to review the cases of renal stone that have been observed in the Mayo Clinic. This series comprised 1,430 cases in which 1,467 operations were performed. Complete operative data were obtainable in 72.46 per cent; 913 of the patients are living and well.

As with other diseases of the kidney, males are more commonly affected than females, and because of the more muscular wall of the body and the shorter distance between the lower ribs and iliac crest, the removal of renal stones is much more difficult in men than in women. In women, the tissues are soft, the suprailiac space is wider, and the kidney is usually delivered more easily than in men. In spite of operative difficulty, and the apparent predilection of the kidney in men to form stone, the operative mortality is the same in men as in women, and the postoperative period of life and the frequency of recurrence of stone are practically the same in both sexes. The mortality from operations on men was 1.05 per cent, and on women, 1.07 per cent. More than half of the patients had been operated on previously; only 10 per cent of the prior operations, however, were on the kidney. Nephrectomy had been performed on 14 patients, nephrotomy on 33, pelviolithotomy on 2, renal exploration on 44; many others had been operated on for disease in the gallbladder and appendix.

Nephrectomy, in most cases, had been performed for pyonephrosis in cases of bilateral nephrolithiasis. The immediate mortality following operation on the remaining kidney was not high, but if the renal parenchyma was injured by wide excision, or in removing the stone, patients often died several years later from renal insufficiency. In most of the cases in which nephrotomy had been performed and stones had re-formed, it was necessary to remove the kidney; at this time the kidney was usually seriously infected and there would be only a small amount of functioning renal tissue. The previous operation, in a number of instances, had been performed from six to ten years before.

Pelviolithotomy was only rarely performed in the earlier cases. In the two cases in the series in which it had been performed, small fragments of stone had apparently been left in the pelvis. Pelviolithotomy, as well as nephrolithotomy, is usually followed by extensive perirenal adhesions, and often a subscapular operation for exploration of the kidney is necessary.

In most of the cases the kidney had been explored previously, and stones had not been found. In a few cases, stones may have resulted from extensive operations and suturing portions of the kidney, and in a number of these, it was necessary to remove the stone at the second operation.

OPERATIVE FINDINGS.

The pelvis was the most common location for stone, and thus pelviolithotomy was the most common type of operation performed. In most of the cases in which there was pyonephrosis, or a large hydronephrosis, nephrectomy was performed. In a number of cases of simple hydronephrosis, the removal of stone relieved the pelvic outlet. The stones were found in the pelvis of the kidney in 70 per cent, in the calyx in 15 per cent, and in the cortex in 15 per cent. Hydronephrosis was an associated condition in a little more than 10 per cent of the cases, and pyonephrosis in more than 22 per cent.

Nephrolithiasis is essentially a surgical disease. The stone may be tolerated for a number of years, but if it is not removed, the kidney becomes infected, and its function destroyed, and the stone becomes a menace to health and life. The formation of calculi has been recognized and described since the time of the first anatomists, but a satisfactory explanation of just how and why they form has

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 30, 1924.

not been given. It is now contended that the formation of calculi is a problem in colloid chemistry which applies particularly to urinary calculi. It is said that sodium chloride solution is suspended in the spaces of a more or less connected scaffolding which consists of a very dilute jello. Stones have been formed experimentally by feeding oxyamid. Keyser has caused the formation of calculi in the urinary tract by producing excessive excretion of urinary crystalloids. He believes that calculi are formed by chemical precipitation and that geographic distribution, race, heredity, age, diet, sex, and trauma have little to do with the formation of calculi.

C. H. Mayo has discussed the hypotheses of stagnation and infection, and directs attention to the fact that the kidney is an organ of filtration that is constantly eliminating bacteria from the circulation. He considers the hypothesis of infection the only tenable one, and contends that the development of stone requires the presence of two types of bacteria. One of these produces the hematogenous infection, while the other comes only from a local focus. Bacteria of the stone-forming type must come in contact at the time when the mucoid exudate is present as a result of the first infection.

Spitzer and Hillkowitz believe that the evidence against the hypothesis of stasis and infection is strong, and that physical chemistry and its subdivision, colloid chemistry, have furnished valuable hypotheses in explanation of stone formation.

Rosenow and Meisser have produced calculi in the kidneys in animals by the injection of a specific organism into the blood stream. His strains of streptococci were obtained from patients suffering from an infection in the kidney. Bumpus and Meisser injected a series of 81 rabbits with strains of green-producing streptococci obtained from the teeth, tonsils, and blood of patients suffering with pyelonephritis, and found lesions of the kidney in 63 of the rabbits. They, therefore, concluded that pyelonephritis may often be due to some form of focal infection.

For a number of years it has been the policy of the Clinic to clear up foci of infection whenever they were evident, particularly in such lesions as ulcers of the stomach, renal calculi, pyelonephritis, and infections in the gall-bladder. It is difficult to determine just how much has been accomplished in preventing recurrences in such cases. After several years of observation, however, it appears that the plan has not been of great aid in cases of gastric ulcer, but that a great deal has been accomplished by clearing up foci, particularly in the teeth, in cases of infected kidneys. It is the general opinion in the Clinic that one of the principal prophylactic measures against the formation of stone, or its recurrence, in the urinary tract, is the elimination of such foci.

NEPHROLITHOTOMY.

In this country, until quite recently, nephrolithotomy was the operation of choice for the removal of stones from the kidney.

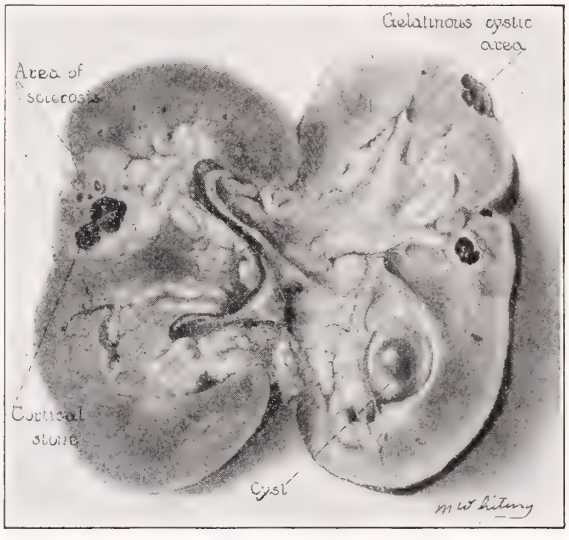

FIG. 1. Small, well encapsulated stones in the cortex of the kidney of a necropsy specimen. There was no urinary infection and the stones had caused no symptoms.

The stones were not definitely localized, or their presence was questionable, and the incision used did not permit delivery of the kidney into the wound; consequently in most instances an extensive exploration of the kidney was necessary. At present there are accurate means of localizing stones, more satisfactory exposure, and better understanding of the anatomy and physiology of the kidney. Incision into the parenchyma of the kidney is rarely indicated for uncomplicated stones in the pelvis and calices. This type of incision injures the kidney, and is often followed by hemorrhage, infection, and local necrosis. Occasionally, in secondary operations, when the kidney is firmly fixed in the surrounding tissues and cannot be raised so as to expose the pelvis, it is necessary to remove the stone through a nephrotomy incision.

In the removal of stones, the kidney is exposed through a posterolateral incision and delivered into the wound, care being taken not to strip it from its capsule. It is carefully palpated, and if possible, the stone is located. Cortical stones without involvement of the pelvis are extremely rare. When they do occur, they are generally well encap-

sulated, and there is little destruction of the renal tissue, and slight or no infection of the kidney. They rarely cause trouble (Fig. 1). A small stone may be located in one of the minor calices and simulate a cortical stone. It may be located and removed by a small incision, or by means of a pair of forceps pushed through the cortex; the overlying renal tissue often is thinned out and fibrous, and may be penetrated readily. In an occasional case, stones are found which have no connection with the pelvis or calices, and apparently do not interfere with the parenchymatous tissue. Such stones are generally just beneath the capsule, and isolated from the functioning portions of the kidney by a fibrous capsule. They cause few symptoms, are readily enucleated, and there is no trouble postoperatively.

Large stag-horn calculi should not always be removed, especially if the stones are bilateral. (Fig. 2). Usually their removal

FIG. 2. Large stag-horn calculus in a partly destroyed pyonephrotic kidney.

requires an extensive incision. It is difficult to remove them completely, and the operation is often followed by severe renal infection and by destruction of a large portion of the renal tissue. The stones occasionally do not cause symptoms, but may be discovered during the course of a general examination. The roentgenogram often stimulates a pyelogram. The function of the kidney is usually quite good. Geraghty observed a patient for more than eight years with large stag-horn calculi, who had only a mild infection. Since operative injury to the kidney is likely to result in considerable renal impairment and since recurrence is common, he believes that such kidneys should rarely be operated on. This type of case has been widely discussed, and yet the question as to whether or not operation is indicated in such cases is still an open one. Hinman believes that most patients with bilateral renal stones should be operated on; he mentions three patients who were well several years afterward, and believes that the infection is reduced and that often the renal function returns almost to normal. If there is infection with stone, the infection will persist and the destruction will progress, unless the stones are removed. Keyes believes that the coral-shaped stones should be removed. Beer and O'Neill believe that if bilateral stones are almost large enough to fill the pelvis, they should be left alone. Beer says that they all recur, Caulk believes that all stones should be removed whether silent or not, as the kidney can function much better. I believe that, ordinarily, bilateral renal stones should be removed in all instances except those in which the stones are very large, apparently taking up much of the space of the pelvis and calices, and yet producing few if any symptoms. If the infection is slight, the condition may have existed for a long time. The destruction which follows an extensive operative procedure may be greater than that from leaving the stone in the kidney, and under these conditions we are inclined not to operate in a certain percentage of these cases.

Large nephrotomy wounds are followed by extensive atrophy of renal tissue, especially if there is renal infection. Often extensive suturing of the wound is required to control the bleeding. Hemorrhage and infection, often associated, are the most common, immediate and late complications following nephrolithotomy. Small areas constricted by the sutures become necrosed and slough away, leaving exposed vessels or necrosis as the result of infection which has readily developed in the areas of lowered resistance. (Figs. 3 and 4). Israel, in reviewing a large series of cases, found that bleeding had occurred in 11.2 per cent following operation, in 17 per cent of which it was fatal. There were three cases in the Clinic series in which severe hemorrhage followed nephrolithotomy. In one case the bleeding started the first day and continued up to the eleventh day, but the patient's general condition was good, and although nothing was done, he recovered completely. In the second case, a stone had been removed one year previously. At the second operation a stone, 2 by 4 cm. in diameter, was removed through an incision in the renal cortex. It had been neces-

sary to expose the kidney subcapsularly. The kidney was friable, and there was marked hemorrhage which was controlled by suture. Seven days later there was severe hemorrhage into the bladder requiring nephrectomy. The kidney was markedly infected and almost completely destroyed. In the

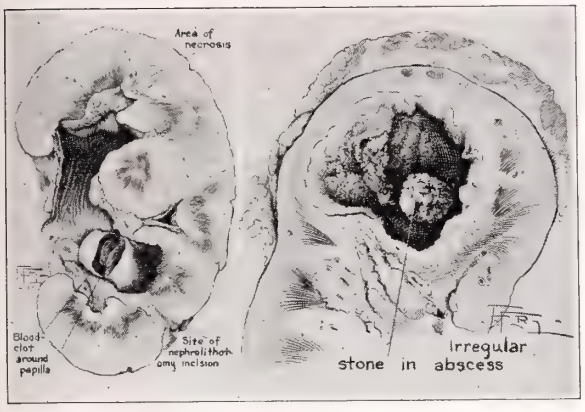

FIG. 3. Necrosis and hemorrhage following partial nephrotomy for stone.
FIG. 4. Area of infection and necrosis surrounding small irregular calculus.

third instance, it was necessary to remove the kidney on account of severe bleeding on the eleventh day.

PELVIC-NEPHROLITHOTOMY.

In certain cases the stone is lodged in the calyx and it is impossible to bring it into the pelvis. The communication between the pelvis and calyx is too small to permit its removal through a pyelotomy incision. In cases of this kind, a pelvio-nephrolithotomy incision is the procedure of choice. The pelvis is opened and the stone located by introducing the finger into the pelvis. It is then pressed up toward the cortex, and after the capsule has been cut through, a pair of blunt forceps are gently pushed through the cortex until they come in contact with, and grasp the stone. Usually the bleeding from such an incision in the renal cortex is slight. The tissue is not cut, but is pressed apart with the blunt forceps. (Fig. 5). A few fine catgut stitches control the oozing and close up the end of the calyx. I have employed this technic a great many times, and in no case has hemorrhage from the kidney, or any serious interference with renal function occurred. The pyelotomy incision is closed by a few seperate stitches.

PELVIOLITHOTOMY.

Posterior pelviolithotomy is the operation of choice for the removal of renal stone, and should be employed whenever possible. Removing stones through the pelvis does not destroy important structures, large vessels are not divided, and a satisfactory anatomic closure can be obtained. Fistulas rarely occur now, following pelviolithotomy.

The kidney is approached through a posterolateral incision large enough to permit its easy delivery. If patients are heavy, or have large abdominal and back muscles, the incision is carried well forward, posteriorly the costovertebral ligament and the quadratus muscles are cut, and if necessary the erector spinae muscles also. The success of the operation and of the elimination of postoperative disagreeable sequelae depends on exposure sufficient to enable the operator to visualize the operative field. The kidney is separated from its fatty capsule and brought well up into the wound, and is then held by an assistant who draws it toward the median line. The posterior part of the pelvis is thus exposed. Often a stone can be felt before the pelvis is opened, and attempts should always be made to locate the stone in this manner. The fatty tissues are pushed away from the renal pelvis and a small incision is made over the stone. It is important to make this incision in the pelvis of the kidney parallel to its border, and it should be made as close to the kidney as possible. (Fig. 6). If there is difficulty in locating the stone, a finger should be introduced into the pelvis and the stone located by palpation. Sometimes, if there is no distension of the pelvis or even

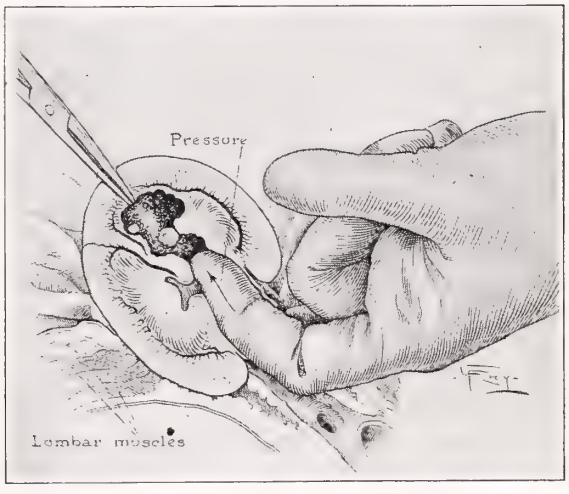

FIG. 5. The stone is freed up to the cortex by exerting pressure with the finger in the pelvis; the pelvis is opened with sharp forceps.

if there is no extrarenal pelvis, this is rather difficult. In recent years the x-ray has been employed in the operating room for the location of stones that could not be located otherwise, and also to locate fragments and smaller calculi after the recognized stone had been removed. This plan of utilizing the fluoroscope has worked very well. Often a stone is located with much less trauma to the

kidney, and it is a great help in making sure that all of the stones and stone particles have been removed. It is necessary that the kidney be mobilized and lifted well out of the wound, and that the technical part of the work be carried out by one accustomed to using the fluoroscope. While undoubtedly some calculi have been overlooked even with this precaution, nevertheless, such instances have been reduced to a minimum in the Clinic.

BILATERAL STONES.

Bilateral nephrolithiasis occurs in about 10 per cent of the cases of renal stones. Usually the stones cause few or no symptoms, and in most instances one stone is large, occasionally very large. Often this stone is in

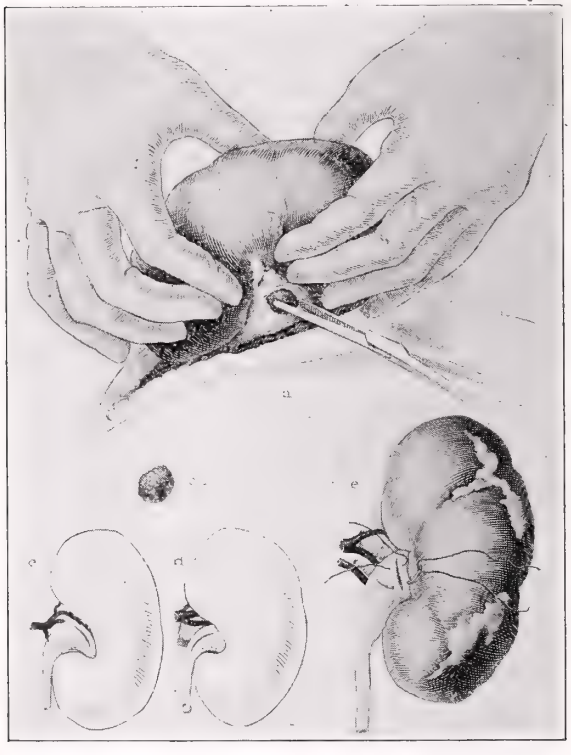

FIG. 6. *a*—Pelviolithotomy. *b*—Stone. *c*—Incision in pelvis parallel to the long axis of the kidney. *d*—Incision parallel to the ureter. *e*—Closure of incision in the pelvis.

a comparatively functionless kidney, and the stone in the opposite kidney is small. Surgeons with the most experience believe that the better kidney should be operated on first. In certain cases, of course, if the infection in both kidneys is considerable and the renal function greatly reduced, it would be unwise to operate at all, but in most cases, operation should be performed. If one kidney is greatly infected and the other only slightly, the stone should be removed from the good kidney first; as soon as the patient has recovered from this operation, the opposite kidney may be removed, if necessary. In the past we have undoubtedly attempted to preserve the renal tissue in some of these badly infected kidneys. Now, largely through the work of Hinman, we are beginning to realize the real function of the compensatory hypertrophy. Our own clinical experience indicates that, under ordinary circumstances, it is better to clear up the better kidney and remove the poor one, much as we are opposed to the sacrifice of renal tissue. If this is not done, and an attempt is made to preserve the infected kidney, the result will probably be a continuation or a recurrence of the infection in this kidney, with a tendency to extend to the opposite kidney. Undoubtedly the recurrence of stone is more common in cases in which the infected kidney is drained in an attempt to save it. According to Hinman, it is likely that as long as the better kidney is carrying on the greater part of the function, the infected one is gradually being destroyed. Conservatism should be practiced in all renal surgery, but at present, it seems more conservative to remove the extensively infected kidney in cases of bilateral renal lithiasis.

RECURRENCE.

Complete data regarding the recurrence of renal stone was obtainable in 1,024 of the 1,413 cases. Fifteen patients died following operation. Stones recurred in 105 cases (10.38 per cent). From data gathered from symptoms, passing of stones, and roentgenographic and cystoscopic examinations, an actual recurrence took place in the same kidney in eighty-seven cases; in eight, stone formed later in the opposite kidney. There was a recurrence in 11.8 per cent following pelviolithotomy, 24.3 per cent following nephrolithotomy, and 5.8 per cent following pelvio-nephrolithotomy. Recurrence is most common following nephrolithotomy. Undoubtedly, in some of the cases fragments of stones were unavoidably left at the time of operation.

The recurrences following pelviolithotomy represent more truly the proportion of actual recurrences. Recurrences seem to be greater following the removal of a single stone than of multiple stones. Braasch and Foulds attribute this to the fact that the single stones are probably removed while the kidneys are still in the stone-forming period. Thirty-seven patients were operated on a second time for recurrence of stone; in six of the cases the stones were in the opposite kidney, and in thirty-one in the same kidney.

POSTOPERATIVE RESULTS.

Complete data were obtainable in 1,024 cases. The mortality following the operation

was 1.06 per cent; of the remaining 1,009, 103 patients died subsequently, and 906 (88.4 per cent) are living. This group of cases naturally represents the work of a number of years, and obviously the same number of cases collected at the present time would show better results. Aside from the accidents which occasionally occur in all major surgical procedures, there should be no operative mortality. With the employment of the newer prophylactic measures, and of the fluoroscope in the operating room, the percentage of recurrence of renal calculi should be considerably reduced, and with a better understanding of the manner in which the renal function is compensated between the two kidneys, we shall be able to employ better judgment in the choice of operative procedures, especially in certain cases of bilateral renal lithiasis.

ABSTRACT OF DISCUSSION.

Dr. F. S. Schoonover, Fort Worth: It is somewhat preposterous for the student to discuss the paper of his teacher. Perhaps none of us in Texas will ever have the clinical experience in kidney pathology that Dr. Judd has had, and our duty towards our patients in Texas is of two sorts. If you will turn over in your mind the subject matter of Dr. Judd's paper, you will recognize that the great majority of the cases cited are the end results of long standing renal pathology. Routine *x*-ray examinations of the kidneys and bladder, where pathology there is suspected, should always be done. The finding of pus cells in the urine should always indicate cystoscopy and a further search for the source of the pus. Before kidney surgery is undertaken, a definite idea must be had of the actual renal function of both kidneys in that particular patient. In cases in which stone exists in both kidneys, that kidney with the better function should be operated upon first. The important thing that I want to bring home to you is that we are responsible for the early recognition of renal pathology before these very serious end results have developed.

Dr. Jas. E. Thompson, Galveston: I feel that it was a privilege to hear this paper. The logical way in which the facts were presented, appeals to me. I appreciate the careful diagnosis, the characteristics of stone, the position of the stone, etc.—in fact, everything a surgeon should do in estimating the case. Dr. Judd is not dogmatic, especially in bilateral cases. These are most important features. The kidney function is not always the same, and therefore tests should be made. I would like to stress large incision, as nephrotomy has many layers. The method of pyelotomy and blunt dissection of the cortex appeals to me.

Dr. A. Clay Gilbert, Dallas: Not until recent years has the medical profession shown much enthusiasm in regard to the etiology of renal calculi. However, much is being done at the present time toward solving this important question. The past and present work at the Mayo Clinic stands out very prominently in this regard. Clinical observation and experience, along with laboratory investigation, tend to show that the answer may be found in renal stasis, colloid chemistry or infection. More accurate knowledge may establish the fact that either of these three factors may be responsible for stone formation. Ordinarily we find at least two of these in association. But the fact remains that to those of us interested in urological problems, the etiology of renal lithiasis stands as a challenge.

There are but few reports in the literature that give us a very accurate idea of the percentage of recurrent calculi. The use of the fluoroscope and *x*-ray, the former during and the latter preceding and following operation, have most decidedly lessened the recurrence of renal calculi. To those of you who have not access to a fluoroscope, I recommend the use of small *x*-ray films as the next best means of detecting stones at the time of operation. Though the preoperative examination would seem to indicate the presence of but one stone, a careful search should be made for other calculi. Rather classical rules have been laid down governing the treatment of renal lithiasis. These must necessarily be very flexible since almost every case is a law unto itself.

Dr. F. C. Beall, Fort Worth: I think we have been too prone to lay too much stress on stone alone. We should carefully work out these cases. We are also too prone to remove the stone and then forget the patient.

Dr. Judd (closing): Dr. Shropshire asked how long after the ureter is ligated before the kidney is destroyed. Experimental work, especially that of Dr. Hinman of San Francisco, shows that destruction occurs in about 14 days, but that if the ligature is removed within this period, the kidney may resume its function, providing other conditions are normal.

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Metaphen.—Bisacetoxymercuri-4-nitro-2-cresol. It contains from 58 to 60 per cent. of mercury in organic combination. Metaphen is a germicide, more powerful than mercuric chloride and certain organic mercury compounds when tested on cultures of staphylococcus aureus and bacillus typhosus. It is stated to be relatively nonirritating when applied to mucous membranes or the skin, and to be without deleterious action on metallic instruments or rubber. Metaphen is proposed for use in the treatment of gonorrhea, infections of the eye, for skin sterilization and for sterilization of instruments and rubber. It is insoluble in water and for use, solutions must be prepared with the aid of sodium hydroxide. It is supplied in the form of metaphen solution 1:5,000. Abbott Laboratories, Chicago.—*Jour. A. M. A.*, Oct. 11, 1924.

CLASSIFICATION AND TREATMENT OF DISEASES OF THE KIDNEY AND HYPERTONIA.*

BY

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Those of us who studied medicine twenty-five or thirty years ago, know the great difficulty of keeping in mind the four kinds of pathological kidneys. The following classification appeals to me and I am giving it to you for what it is worth:

1. True Nephritis.
   a. Acute Glomerulo-nephritis.
   b. Chronic Glomerulo-nephritis, with good kidney function (second stage).
   c. End stage with kidney insufficiency (Interstitial Nephritis).
2. Nephrosis.
   Necrotizing Nephrosis or the bichloride kidney.
3. Hypertonia.
   a. Essential or benign Hypertonia.
   b. Malignant Hypertonia.

Volhard and Fahr state that (1) The pathogenic cause of every true nephritis is bacterial infection; and, (2) the different forms and stages of nephritis have the same etiology. Every case of true nephritis is accompanied by evidence of inflammation and destruction of the glomeruli and tubules, retention of nitrogenous products in the blood, creating uric acid, albumen and casts in the urine and blood pressure above the normal. Now nephrosis is a degenerative lesion of the kidneys, characterized by low blood-pressure and salt and water retention, albumen in large quantities, blood casts, etc. This is the same as the old parenchymatous nephritis with low blood pressure. Nephrosis is the rarest of kidney lesions and uremia is never encountered. Cold, exposure, tuberculosis, syphilis, diphtheria, measles and occasionally pregnancy, are etiological factors in nephrosis. The bichloride kidney is simply a necrosis with evidence of regeneration of the epithelium.

TREATMENT.

TRUE NEPHRITIS, ACUTE STAGE.

In acute nephritis, the sinuses, teeth and tonsils must be looked after carefully, all foci of infection removed, the kidneys guarded and complications treated. Suitable time must be given for convalesence and rest in bed is necessary. Orange juice, lemonade and milk sugar are given for the three or four days, and saline purges and sweats, and to overcome acidosis, I am in the habit of giving Upjohn's citro carbonate, three or four times a day. As the symptoms abate, cream, milk, milk toast, cereals and some of the green vegetables may be given. In suppression of the urine, McElroy advises Fischer's solution intravenously, but I think bleeding is advisable.

TRUE NEPHRITIS, SECOND STAGE.

In the second stage of chronic glomerulo-nephritis with good kidney function (these are the cases that are found in a routine life insurance examination), the patients usually have no symptoms at all, or if they do, these are hematuria, or slight dizziness and headaches. No radical treatment should be instituted at this stage. The patient should be instructed to reduce the diet, to rest a little, play a great deal, avoid mental and physical strain, and not to hurry or worry. All foci of infection should be searched for and removed and, where possible, removal to a suitable climate such as Florida or California, should be advised.

THE END STAGE, OR INTERSTITIAL NEPHRITIS.

By this time, the heart is enlarged, the blood-pressure is high, there is a fixed specific gravity of the urine and retention of nitrogenous products in the blood. The phthalein output is low and there is polyuria night and day. Many of these cases are discovered by the ophthalmic surgeon. The amount of nitrogenous products in the blood is a most excellent guide in the giving of the protein foods. Hot baths, outdoor life and many vacations are helpful, and during the exacerbations, absolute rest in bed. Drugs to lower the blood-pressure may have to be given, and diuretin and digitalis may prove of great value, especially if cardiac decompensation is beginning. As a prognostic test blood creatinin is the best, as over 5 millograms per 100 c.c. of blood has proven fatal in a very short time. Sodium chloride and fluids should be cut down unless there are uremic symptoms threatening.

NEPHROSIS.

The most essential symptoms of nephrosis are scanty urine (less than 500 c.c. in 24 hours), edema, and salt and water retention. This being true, it is utterly wrong to withhold protein foods over too long a period of time. Salt-free diet should be ordered and fluids limited to 1250 c.c. in 24 hours. Prevent tuberculosis and syphilis. Chronic suppurating foci must be removed. Hot packs and the Karell diet are useful, and tapping when necessary, and saline purges. Diuretics must be tabooed.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

NECROTIZING NEPHROSIS OR THE BICHLORIDE KIDNEY.

Use emetics and egg albumin early and if there is any evidence that the poison has been absorbed, use Fischer's solution intravenously and begin with citro carbonate, two heaping teaspoonsful to a glass of water, every four hours. No food should be given except Chace's non-protein diet, which is the juice of one lemon in two-thirds of a cup of water with four to six tablespoonsful of milk sugar, four times a day. Sodium hyposulphite has been given with splendid results. The diet should be increased very cautiously. If there is hematuria, use fibrinogen subcutaneously.

BENIGN AND MALIGNANT HYPERTONIA.

While the cause of high blood-pressure is not known, when it is once established, the patient (no matter who he is or where he came from) is going to be carried off in one of three or four ways—apoplexy, cardiac decompensation, uremia or intercurrent infections. The patient must avoid physical and mental strain. Have the tired business man get him a hobby! When symptoms appear, such as dizziness or numbness of the hands and feet, put these patients to bed and give them purgatives and orange juice. This will make them symptom-free, and you won't have any trouble getting them to do it again. Mosenthal says that a salt-free diet does no good, while Frederick M. Allen contends that the results of such a diet are greatly beneficial in permanently reducing the blood-pressure. I believe Allen is nearer right. Where blood chemistry shows no retention of nitrogenous products in the blood, I do not put the patient on a rigid, low-protein diet but cut down on the amount of *all* foods and depend on hygienic measures and outdoor exercises. I never use drugs until symptoms manifests themselves, then nitroglycerine, digitalis, diuretin and some form of iodine as the sheet anchor.

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ABSTRACT OF DISCUSSION.

Dr. J. W. Torbett, Marlin: The classification of Volhard and Fahr is one of the most rational I have seen. I cannot fully agree, however, with their quoted statement that all cases of true nephritis are primarily and solely caused by bacterial infection. The work of Newburgh and Marsh, at Ann Arbor, has shown that there are three general causes of common renal diseases: (1) Infections as found in glomerulo-nephritis and nephrosis, to which all agree; (2) a high protein dietary (either vegetable or animal protein), when absorbed in excess of the body's needs, and (3) mineral or chemical irritant absorbed and eliminated through the kidneys, producing direct irritations, such as mercury, arsenic, and other poisons.

Newburgh and Marsh made a large series of experiments on perfectly normal young men, to whom they fed one pound of beefsteak daily, and also a high vegetable protein diet. In all of those who digested and absorbed this large amount, blood cells, casts, etc., appeared in the urine in two or three days, showing decided renal irritation. Other cases with nephritis already were thus fed and made much worse by this high protein dietary, either of animal or vegetable protein. They fed a large series of rats and rabbits over a considerable period of time and obtained the same results. Those animals after several weeks' feeding were killed and the post-mortem examinations showed true sclerotic or contracted kidneys. We know this high protein dietary has 58 per cent of its end products metabolized as carbohydrates and eliminated mostly by the lungs, but the other 42 per cent as amino acids and other acid end-products, are neutralized by the ammonia function of the liver, as shown by MacLeod, or eliminated at once by the kidneys. If this overfeeding be continued for a considerable period, the neutralizing function of the liver will be overworked and impaired, and likewise the very important bacteriocidal function of the liver, along with diminished renal elimination. This relative acidosis and toxemia lowers the patient's resistance and makes him susceptible to infection which may then supervene, secondarily, not primarily, and make bad matters worse.

Several years ago, Charrin showed that bacterial resistance is synonymous with normal blood alkalinity. Dr. Grigsby's treatment by fruit juices, which enter the blood as mineral vitamines and alkaline carbonates, helps to correct this condition. According to Sherman, Chittenden and Hindhede, the ordinary person, with moderate exercise, does best on 1.2 calories per pound of body weight, which can be furnished a person of 150 pounds weight by 1½ quarts of good milk daily. Salant of Washington, has shown that nephritis produced by certain mineral salts was relieved by a carrot and potato diet. Thus fresh fruits and green vegetables, with their vitamines and alkalinizing minerals, are an essential preventive and curative dietary in all types of nephritis and hypertension.

Dr. MacKin Marriott, in the March issue of the *Medical Clinics of North America*, has a splendid article, showing well the two types. The first was a nephrosis in a pale, puffy, edematous child with fever, scant urine with albumin and high specific gravity. There was no dye, urea or nitrogen retention; the blood pressure was about normal. This case was rapidly relieved by drainage of the accessory nasal sinuses found to be acutely infected with a staphylococcus infection. He says that 20 cases have been seen that were similarly infected, and which he treated and cured. They were given a liberal diet. He claims that edema is produced by a substance in the blood, caused by the infection, which changes the permeability of the tissues and cells of the body. Dr. S. W. Clausen of the St. Louis Children's Hospital Laboratory, has recently isolated this substance. The second case was a child with the acute glomerulo-nephritis. She had increased blood pressure, some albumin, free urine and many blood cells, but increased dye and nitrogen retention. She was relieved by fruit juice and a milk diet, low salt intake, and the removal of a streptococcic tonsil infection.

Dr. James C. Doane of Philadelphia warmly recommends freshly prepared calcium sulphide solution (one grain to the ounce of water) intravenously in 5 to 7-grain doses, and also for lavage and colonic

irrigations, in bichloride poisoning. The treatment should be kept up for several days until all traces of mercury are absent from the urine and feces.

For several years past, I have been recognizing and treating hypertension cases at an early stage by a balanced simple diet, by baths for increased elimination, and regular habits of sleep and exercise. Many of these cases have become normal and remained so. Early recognition is the golden opportunity. A regular examination once a year, just like a life insurance examination, is a great safeguard.

Dr. Grigsby (closing): Dr. Torbett has given us an interesting resume of this subject. The child that he refers to with the sinus infection, tends to substantiate my contention that the cause of nephritis is toxic. Nephrosis can be caused by a drug. I have had a case of nephrosis produced by the administration of neoarsphenamine. I have had syphilitic nephrosis to clear up with neosalvarsan treatment. I believe that the cause of nephrosis is toxins and that the cause of nephritis is infection.

MOSQUITO CONTROL ALONG THE TEXAS-MEXICAN BORDER, WITH SPECIAL REFERENCE TO CONTROL OF AEDES AEGYPTI.*

BY

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Mosquito control work in Texas has been principally for eradication of malaria and not until the dengue epidemic of 1922 was any particular attention paid to the control of the most domestic of mosquitoes and the insect host of dengue, the Aedes Aegypti, more commonly known as the Stegomyia.

While control over the production of this mosquito is worth while from the dengue standpoint, it is not on account of this disease that the U. S. Public Health Service is coöperating with the State and the local communities along the border, but because of the more serious problem of the possible introduction of yellow fever from Mexico.

While it was well known that during the years 1920 to 1922 yellow fever was more or less prevalent in the east coast sections of Mexico, little thought was given to the possibility of its again entering the United States as it did in 1902 and 1903. Yet a study of the conditions as they exist at present indicates that any foci of infection existing in Mexico and particularly in the states bordering the east coast, must be considered as a distinct menace to that section of Texas bordering the international line.

In a paper entitled "Yellow Fever, Its Distribution and Control in 1920," by Gorgas, Carter and Lyster,[1] the following statement is made: "There seems good reason to believe that the Gulf Coast of Mexico was probably the original cradle of this disease in man, and it may also be its last resting place."

This being true, we have no desire that in its dying struggles it should again make a last visit to our country which it has so often visited in the past.

The last great epidemic in Mexico occurred in 1903, when the disease extended northward from Vera Cruz and along the line of railroad from Tampico into Laredo and also to San Antonio. From that time until 1920, there were apparently only a few sporadic cases occurring in Mexico and these for the most part in the lower gulf states, particularly in the Yucatan peninsula. That the disease was not stamped out in the campaign following the 1903 epidemic, was apparent from the more or less general outbreak of 1920.

This latter epidemic, as in the case of the one of 1903, started in the vicinity of Vera Cruz and followed the same general line as did the earlier one. Active work by the Mexico Government, the International Health Board and the oil companies, undoubtedly prevented a recurrence of a widespread outbreak, and by the latter part of 1922, had practically stamped out the disease in the coast cities.

During the period between the two epidemics, the disease was undoubtedly present in the smaller villages, perhaps in a mild form and hence unrecognized. The question now is, "Was this disease stamped out in the smaller villages during the campaign of 1920 to 1923?" Until this question can be answered in the affirmative, we should be constantly and continually on guard. Let us consider the conditions existing in 1903 as compared with those existing today, in order that we may better understand the possibility of accidental introduction and the complexity of the control problem should we be again threatened by this disease.

In 1903, there was in the area including Webb County and the counties lying between the Texas-Mexican Railroad and the Rio Grande River, a population of approximately 80,000 people, with but three cities, namely, Laredo, Corpus Christi and Brownsville. Of this population 67,000 were Mexican, or of Mexican parentage. Today in that same area there is a population of over 200,000, with 17 cities of various sizes. Of this population only about 90,000 are Mexican or of Mexican parentage, or less than 50 per cent of the total. Of this population practically 100 per cent are non-immunes.

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 30, 1924.

1. Gorgas, W. C., Carter, H. R., and Lyster, P. C.: "Yellow Fever, Its Distribution and Control in 1920, Jour. South. Med. Soc., No. 12, p. 873.

At the time of the 1903 epidemic, this area was more or less isolated, there being no rail connections except those between Laredo and San Antonio, and Laredo and Corpus Christi. Transportation other than by rail was necessarily slow and the spread of infection nil. Today we not only have rail connections throughout the greater part of this section, but also direct connection with Tampico and the east coast section of Mexico. Highways have been constructed and improved and the development of the automobile has brought all sections into close proximity with one another. Hence, today it is possible to travel by automobile from one point to another in as many hours as it formerly took days. In 1903 this area was for the most part undeveloped, while today extensive development is being carried on. In 1903 the demand for labor was almost exclusively confined to the few required on the ranches, while today thousands of laborers are required during the crop season and this additional labor must be supplied from Mexico.

The demand for labor and the present immigration laws have produced conditions which materially increase the potential danger of the introduction of epidemic diseases, particularly through the illegal entry of aliens. Observations would indicate that during the period when the demand for labor on the ranches near the border is greatest, not over one-fourth of the Mexicans entering the United States, enter legally through the ports of entry where they may be subjected to proper medical inspection. Due to the stringency of the present immigration laws, European immigrants are being routed through Mexican east coast ports, with the intention of gaining entrance to the United States illegally. The smuggling of aliens, both Mexican and others, into the United States would appear to be a well organized business and a profitable one, and those of you who know the border can readily realize the almost impossibility of controlling in its entirety this illegal entry.

The Public Health Service, realizing that a potential danger existed and that if this should become a real danger a situation would develop which would be difficult to control, undertook, in 1923, to coöperate with the State and the local communities in the border section toward the control of the production of the Aedes Aegypti mosquito. This was done so that, should there appear to be imminent danger of the introduction of yellow fever, steps could be quickly and readily taken to at least prevent spread of this disease, if not to prevent its entrance.

A preliminary study of the problem indicated that the sections most important were the counties directly upon the river, from Webb County to the mouth, and that a second line of defense in which were included the communities along the main lines of travel out of the valley district as far north as the Texas-Mexican railroad, was also necessary. In this second line San Antonio should be included, since it is the objective point for those aliens entering illegally who intend to remain more or less permanently, especially the European alien. While these suppositions were substantially correct, there were some errors as to the relative importance of the various districts. Starr County, for example, was not considered as important from the standpoint of control work as were some of the other counties, yet we now believe that it is one of the most important, due to the illegal entry taking place into that county.

It was assumed that the majority of the Mexican laborers entering for work in the cotton fields would remain for a period of a few days in the Valley district, but the movement of this labor was found to be direct from the border to the cotton fields in the Corpus Christi district, which fact made the necessity for control work in the counties in this district equally as important as in the counties directly upon the border.

Conditions existing along the Border and in adjoining counties are ideal for the production of the Aedes Aegypti and this mosquito is one of the most prevalent (in fact, almost as prevalent as the common house mosquito, Culex Quinquefaciatus) there and also in the San Antonio district. The Aedes Aegypti breeds only in artificial containers in close association with human beings and has an extremely short flight range. Control, therefore, consists in preventing container breeding and would be relatively simple, were it not necessary to carry on this control upon the individual premises and, to a great extent, to interfere with what are considered personal rights. Furthermore, it is often necessary to completely change customs which are generations old and firmly implanted.

The control work has consisted of a combination of education and routine inspection, with the object of eliminating unnecessary water containers and of protecting the more permanent containers. Public water supplies exist in the larger incorporated communities only and in the greater part of these, the distribution systems are not sufficiently extensive to reach the entire population. We find, therefore, the original type of water distribution, the water carrier with barrels for the storage of water. Cisterns

are used where there is sufficient rain to warrant and, to a smaller extent, wells.

Not including El Paso, San Antonio and Corpus Christi, work was instituted, during 1923, in 58 cities and villages, having a total population of 132,000. In these communities there were 27,400 premises and upon these premises were found 14,536 water barrels, 1,824 cisterns and wells, in addition to the usual collection of smaller containers of all types. Practically none of the more permanent containers were in any way protected against the ingress or egress of mosquitoes.

As stated above, the control work consisted of interesting the people in the necessity of eliminating unnecessary containers and the protection of all others. In order to carry on this work, local inspectors were trained by the Federal inspectors, the work of these local inspectors being checked from time to time. Federal inspectors have been stationed in each county in which the work is being carried on, for this purpose. Some modifications of this plan exist, but this has been the general plan followed. The work in the 58 communities referred to above, has now progressed to such a stage that instead of there being over 14,000 water barrels, we now have 5,400, a reduction of 63 per cent, and of this number 66 per cent are mosquito proof. While the number of cisterns and wells remains substantially the same, 60 per cent are now protected. The small containers still exist, but in reduced numbers, and more or less carefully watched, the last inspection showing only 2,267 such containers.

Methods of protecting water containers must be simple and within the reach of all, if good results are to be obtained. Water barrels are protected by covering with a piece of cloth, either cheese cloth or flour sacking and held in place by the upper hoop. Spigots are recommended but not required. Barrels thus protected have rarely been found to contain mosquito larvae. Wells, underground cisterns and above ground wooden tanks have been protected by the introduction of Gambusia Affinis. The use of fish, however, is not possible in metal cisterns due to temperature conditions, so screening or routine oiling must be resorted to.

The leader in the work and the city in which control measures are most perfect, is Laredo. This city realized the danger of again being visited by yellow fever and began work the latter part of 1921. At the start this city, with approximately 7,000 premises, had over 7,500 water barrels in use, whereas today, there are but 188, a reduction made possible through the elimination of unnecessary barrels and the extension of water mains. All cisterns and water barrels are protected and care is exercised over the control of other container breeding places. At present not over one container per 1,000 premises is found breeding.

Of the rural areas, Starr County stands out well above the others and it is believed that before the season is well advanced a 100 per cent reduction in the breeding of Aedes Aegypti will have been obtained in that county.

If control over the production of one species of mosquito is to be successful and continued, it is necessary that more or less complete mosquito control work be undertaken. No differentiation is made in the minds of the public as to the type or species of mosquito. They are interested almost entirely in the question of comfort and the success or failure of control work is dependent largely upon this question. It is necessary, therefore, in any mosquito control work, whether it be control over the production of the malaria carrying mosquitoes or over Aedes Aegypti, to control production of the other types of pest mosquitoes. While the work of 1923 was confined almost entirely to control over Aedes Aegypti production, nevertheless as much attention as possible was paid to controlling the production of other species. Due to lack of finances and to a considerable extent to lack of interest, this control work was largely confined to proper distribution of Gambusia Affinis and the reliance upon this minnow for partial control.

Malaria is already assuming considerable importance in the lower border counties and will assume greater importance as times goes on. Four of the Anopheles are prevalent in this section, namely, Quadrimaculatus, Pseudopunctipennis, Crucians and Albimanus, the latter species being one of the principal malaria carriers of the Isthmus, and not before reported as breeding in the United States. We therefore find in this section the principal malaria carriers of both the southern United States and of the Central American countries.

The malaria index in the section above referred to is at present fairly high and is bound to increase with the increasing population, a majority of whom are coming from non-malarious regions. Malaria will undoubtedly have a material effect upon the future development of the Valley unless steps are taken to remedy the existing conditions. It is hoped that the campaign so successfully started in 1923, may continue and that control not only over Aedes Aegypti production may be established, but also control over the production of malaria-carrying and pest

mosquitoes as well, and that mosquito control work may be the means of developing other health activities which are urgently needed.

A PLEA FOR SKIN-GRAFTING.*

BY

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In presenting this paper, it is not my purpose to offer anything new, but rather to urge a more frequent and early use of the skin-graft.

It was an ancient custom in India to punish a man for his crime, by the torture of cutting off his nose. Naturally, a development of rhinoplasty followed, and with this, skin-grafting is closely associated and was used by an ancient sect in India. The first graft was probably taken from the buttocks and transplanted to the face. At the present time, there are numerous sources and methods, from applying the scrapings of the epithelium to granulating surfaces to the transplanting of whole skin.

With the progress of civilization and the development of the great industries, have come many extensive skin injuries, and it is not surprising that the technique of skin-grafting has been simplified and its uses extended. The object of the skin-graft is to cover denuded areas with epithelium. The simplicity of the surgical technique and its slight danger to the patient, together with the beneficial results of skin-grafting, justify its general use; yet, it is still common to see cases of skin destruction in almost any hospital, which are permitted to heal by granulation. This is a great injustice to the patient.

Skin-grafting is divided into two general divisions, the autograft and the isograft—the autograft being much more successful and stable. The isograft should be used only after the blood typing rule. The five general types of skin-grafts which are commonly used and which give the best results, are:

1. The Ollie Thiersch, which is composed of the epidermal layer, and may be of any size or shape.
2. The Reverdins, which is composed of the epidermal layer and a little of the dermal, and small and round or oval in shape.
3. The Deep Pin, which carries all the layers, and resembles the Reverdins in size and shape.
4. The Wolf, or whole skin-graft, which may be of any size or shape.
5. The Pedunculated Flap, composed of skin and some subcutaneous fat.

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The Ollie Thiersch graft is used on a freshly cut surface or a granulating area, to cover large and unexposed areas, and when healed, it contracts to about one-third of its original size, and has but little more elasticity than that of a thin scar.

The Reverdins graft may be used on a freshly cut surface or upon granulations. When healed, its contraction is slightly less, and elasticity is greater than that of the Thiersch.

The deep pin graft is used upon granulating areas and is usually preferable to the Reverdins. It is the best graft for general use and has the advantage of giving more stable covering, greater flexibility and less contraction.

The Wolf or whole skin-graft may be used upon freshly cut surfaces or upon undisturbed granulations. It is used upon exposed areas when great flexibility and normal appearance is desired. When this graft heals, there is but little contraction. However, it has the disadvantage of having more failures than those of the other methods, and it occasionally becomes pigmented.

The pedunculated flap gives an ideal covering. When healed, it contains all the characteristics of normal skin. The flap may be raised from an adjacent area and slid over the denuded area, or it may be brought from a distant point by a long pedical or by the two stage operation. Very large areas may be shifted in this way, great care being taken to maintain a good blood supply to the pedical. This method is used about the face, joints, and other areas requiring great flexibility of the skin, and the graft is applied to freshly cut surfaces and sutured in place.

The success of any method of skin-grafting depends on the proper preparation of the area to be covered. First, this area must be free from all necrotic tissue and bacteria. This may be accomplished by the Carrel-Dakin method or by the use of caroid powder, which is a pepsin of the carica papaya fruit. This preparation very rapidly dissolves necrotic tissue, and without pain. Another method is by curretting off all exuberant granulations or by cauterizing them with silver nitrate, such granulations being an evidence of infection. The granulations may be cleansed with benzine without injury or pain. The granulations should be healthy and escharotic drugs should be avoided for 24 hours prior to the operation. Carrel, of the Rockefeller Institute of New York, has shown that no scar tissue forms in a wound until after the twelfth day. The surgeon should endeavor to get the wound clean and covered with the graft before this

time, so as to prevent the great contracture which occurs when cicatricial tissue is formed in old wounds, before the skin-grafts are applied.

The characteristics of each type of skin-graft, the location of the area to be grafted, and the particular function to be obtained by the use of the graft should be carefully considered, and not merely the covering of an area with epithelium, for certainly more than epithelium is wanted as a covering for the knuckles, and such places. The growth and success of a graft on a properly prepared field is marvelous, and only a few failures are encountered.

Fixation of the graft is important, and in most cases this is best accomplished by a paraffin mesh dressing, and a properly fitting bandage.

CONCLUSIONS.

1. The early use of skin-grafts lessens contractions, distortion and adhesions.

2. It adds to the comfort of the patient, lessens the loss of function and shortens the time of invalidism.

3. It also has economic advantages, as the use of skin-grafts shortens the patient's stay in the hospital, thereby permitting a quicker return to his occupation.

COMPULSORY VACCINATION.*

BY
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It is hardly necessary to discuss the protective value of vaccination before a body of medical men. However, it may be well, since this paper is written advocating compulsory vaccination and revaccination, to review briefly some of the incontrovertible evidence in favor of these procedures. It has been definitely proven that vaccination in infancy, with revaccination at the age of six or seven years and again at puberty, constitute an almost complete protection against smallpox. In the rare cases in which smallpox occurs after this, the disease is so modified that it is a trifling malady. Up to the time of Jenner, smallpox was one of the worst scourges of the civilized world and was essentially a disease of childhood. It has now become so rare in those countries where vaccination and revaccination are thoroughly carried out, that many physicians, in such countries, have never seen a case.

Germany has always been cited as an example of what vaccination and revaccination may accomplish since the systematic adoption of these procedures stamped out smallpox in the German army years ago. Before this, the annual death rate from smallpox, in Berlin alone, was between 250 and 400 per 100,000 inhabitants; whereas, the aggregate death rate reported in 1917 for the disease in all Germany (even including imported cases) was less than 0.1 per 100,000. The following table, after C. E. Simon, which includes both the morbidity and mortality from smallpox in the Germany army from 1875 to 1892, as contrasted with a nearly similar period in the armies of Austria, France and Italy, in which systematic revaccination had not been done, is striking.

Army	Period	Morbidity (No. of Cases)	Average per Year	Mortality (No. of Cases)	Average per Year
German	1875 to 1892	13	0.7	1	0.05
Austrian	1875 to 1886	9,864	896.7	595	54.0
French	1875 to 1892	8,356	491.5	705	41.4
Italian	1875 to 1894	2,565	135.0	193	10.1

In 1890, the French Minister of War, M. de Freycinet, referring to the Franco-Prussian war, wrote:

"One now sees the French army protected by the strict application of compulsory vaccination and revaccination * * *. I cannot forget that in 1870-71 the German army, counting 1,000,000 vaccinated and revaccinated men, only lost 459 men from smallpox in two years, whereas our own army, far less numerous, had from the same cause, a loss of 24,469 men, whom revaccination might have saved for the service of France."

At the present time the armies of the world have demonstrated these same facts. In those armies in which vaccination has been systematically practiced, smallpox gains no footing. The same may be said of countries in which laws exist requiring vaccination and revaccination. It should be borne in mind that, after all, army vaccination is revaccination, since the great majority of recruits have been vaccinated in infancy. In this connection it may be well to cite the known and abundantly proven immunity of doctors, nurses and others in smallpox hospitals, due entirely to the systematic revaccination of such persons.

Since Jenner's time the gradual adoption of vaccination has decreased the mortality of smallpox at all ages. This decline has been principally among persons under ten years of age, though most of all among children under five years of age. Now the mortality after the age of ten is increasing—slightly perhaps in persons from ten to fifteen years of age, but more rapidly with advancing years. The explanation of this increase will be found in the compulsory vaccination of infants and the neglect of revaccination later. Communities in which vaccination and revaccination are systematically practiced are,

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 30, 1924.

as a matter of fact, immune from outbreaks of smallpox. Only a small part of the population which has evaded or neglected revaccination is liable to the disease. Those communities, however, in which, from ignorance or indifference, or the activity of antivaccinationists, opportunities for protection have been persistently neglected, suffer more or less extensive and disastrous outbreaks.

In recent years there has been a marked increase in the prevalence of smallpox in the United States. As a rule, it has been of a milder type, though outbreaks have occurred from time to time in widely separated localities, which show by their virulence that it may at any time revert to its former malignancy.

An instance of its wide prevalence during the past winter, is shown from a report in the *Journal of the Americal Medical Association* of March 22, 1924. This report states that numerous outbreaks of the disease had taken place in the United States and Canada during the previous month. In Windsor, Ontario, there were in one week 15 deaths and 60 additional cases. In addition to the outbreak in the Province of Ontario, many cases were reported in other parts of the Dominion, 23 cases having been found at Calgary, Alberta.

In the United States, smallpox was reported from Alabama, Ohio, Connecticut, Michigan, and other states. In Ohio, 40 cases were reported from Chagrin Falls and 14 at Rayland. New Britain, Connecticut, reported 30 cases and 59 were found in Birmingham, Alabama, 20 of these being reported within two days. Michigan had reported 421 cases, 140 of which were in Detroit. (The health department of the City of Detroit states that there were 267 cases reported in that city in February.)

The same issue of the *Journal* contains a report from the Swiss Federal Health Service, regarding the smallpox epidemic of 1921-22 in Switzerland, which is pertinent. This report states that in that country vaccination is compulsory in certain cantons, but not in others owing to antivaccination propaganda. During the entire epidemic there was not one case of smallpox in the cantons that require vaccination, despite the fact that free communication existed between them and the cantons where smallpox was epidemic. Thirteen cantons were affected and 1,159 cases of smallpox were reported in 1922, in 92 per cent of which vaccination had never been done. The total cost of the epidemic to the country, in life and money, not including the loss of time and labor, was enormous. The report further states that a campaign was inaugurated endeavoring to show the public the fallacy of the pernicious propaganda responsible for the extent of the epidemic.

While many of the recent outbreaks of smallpox have been of the milder type, some of them were virulent, and the tendency to regard the milder type as a separate entity (so-called Kaffir milkpox, West Indian modified smallpox or alastrim), is to be condemned. It has been shown by Leake and Force, of the United States Public Health Service, working in Jamaica and Haiti, that immunity to vaccinia is conferred by the disease called alastrim. These workers produced a vesico-papular eruption in monkeys by inoculation with material (crusts and vesicle contents) from alastrim patients, and the animals were not only protected against reinoculation with alastrim, but were immune to vaccine virus. Rabbits inoculated with alastrim showed no eruption, but were nevertheless immune to vaccine virus. Rabbits previously inoculated with vaccine virus gave positive intracutaneous reactions to smallpox and alastrim material and to vaccine virus. From these experiments they concluded that alastrim is identical with smallpox. Alastrim generally protects against smallpox and vaccination, though, as in smallpox, a successful later vaccination or even a second attack of the disease may occur. The milder form of smallpox, in the various outbreaks above alluded to, were probably, therefore, as dangerous from the standpoint of the epidemiologist as the more virulent types, since they are equally contagious.

An analysis of the incidence of smallpox and of the various laws governing vaccination against it in the United States, shows that in those states which have a good compulsory vaccination law, smallpox is reduced to a minimum; whereas, the maximum is reached in those states in which the law is lax or not enforced, or in which there is no law at all. The laws governing vaccination differ essentially in almost every state in the Union. In three or four states there is a general compulsory law; in others, the law can be made compulsory at the discretion of the state boards of health, but in the majority of these the enforcement of the law is left to local health officers. In many states vaccination is made a condition to the admission of children to the public schools. It may be only made a condition to school admission when smallpox is epidemic in some, while in others this requirement is practically annulled by a law authorizing the substitution of a certificate by parents or guardians that they are conscientiously opposed to the practice of vaccination. Some

states forbid making vaccination a condition for attendance in the public schools, while in others, compulsory vaccination of any kind under any circumstances, is forbidden.

When compulsory vaccination of any kind is absolutely prohibited by law, the only recourse of the health officer to prevent the spread of smallpox will be to offer vaccination, to quarantine contacts, to close the schools, and to prohibit the unvaccinated from going into places of amusement, manufacturing plants, boarding houses, etc., and to notify the owners of such places that if such persons be admitted, their establishments will be quarantined. Under these circumstances there would be no compulsion, though the cost in money and life in an epidemic of smallpox would be great. How much better and cheaper a law authorizing compulsory vaccination and revaccination would be!

The power of states to enact compulsory vaccination laws has been decided by the Supreme Court of the United States and by numerous state courts in the affirmative, time and again. It has also been decided that state legislatures have power to delegate their authority to state and local boards of health, but there is a decided difference of opinion and various court rulings as to whether state boards of health can enforce regulations, or local boards of health can be delegated authority from state boards of health in the absence of a definite law. In other words, the courts have held, in the main, that definite laws are required to give state and local health authorities the right to enforce vaccination.

It would seem, then, from a study of the incidence of smallpox in the United States and of the laws governing vaccination, that smallpox is more or less dependent on the will of the people. If state legislatures enact laws which require efficient vaccination, smallpox will be negligible; if, on the other hand, strong feeling and sentiment against vaccination preclude such legislation, the incidence of smallpox arises to a high point in such states. If vaccination and revaccination, systematically practiced, will do away with smallpox, why do we still have smallpox? Why are so many otherwise intelligent persons opposed to vaccination? Is it possible, at the present time, to regulate vaccination and revaccination by law?

An answer to these questions may be found partly in the natural antipathy of the people to be coerced, and partly in the well known indifference of the medical profession in regard to the necessity of teaching and practicing vaccination and above all revaccination.

Many parents, mainly through ignorance, though perhaps a sense of false security contributes, neglect revaccination on account of the fact that their children have been vaccinated in infancy. Either they do not know (perhaps never having been told) that second and third vaccinations are necessary, or it may be that they are victims of the anti-vaccinationists. It is the duty of every physician to give information regarding vaccination and revaccination to his patients. He should inform them fully of the necessity, not only for vaccination in infancy, but of revaccination at six or seven and again at puberty. He should do his best to inform his patients himself and to see that education along these lines, through schools, health departments and magazines, is fostered. In this way the propaganda of the opponents of vaccination may be combated.

Many intelligent persons have a dread of vaccination, either through unfortunate experiences of their own, or through those of others. With modern virus and technique, the former accidents of vaccination are negligible. Antivaccinationists, however, are always busy, alert and frequently untruthful, so that one hears harrowing tales of the accidents of vaccination. It will take much tact and patience, but again the physician must step into the breach, explaining modern methods of securing vaccine virus, telling parents or patients something of asepsis and the care of the vaccination wound and emphasizing the lack of danger attendant upon proper vaccination. He might also explain that the government, through the United States Public Health Service, supervises the manufacture and sale of vaccine virus; that the potency of vaccine virus is important to secure a proper "take"; that the virus must be kept on ice and that it cannot be kept too cold; that, as it rapidly deteriorates at room temperature, virus which has not been properly kept is worthless, as it will not give the reaction desired.

The physician owes it to his patients not only to use potent vaccine but to inform them fully in regard to the methods of its use and the manner of keeping it potent. He who buys, or allows his patients to buy, the ordinary drug-store vaccine, for use in vaccination, is courting failure. Finally, the physician should strive to vaccinate so that there will be no bad after effects and also, so that there will be as little delay from the procedure as possible during an epidemic or at quarantine. By the methods outlined and by a painstaking and careful study of the operation of vaccination and of its after-effects, he will be able, in time, to convince patients that it is not something to be dreaded or to avoid.

As has been said, few states have compulsory vaccination laws. In order that uniformity may be had, a model law requiring proper vaccination and revaccination should be adopted in all states. It is selfish not to be vaccinated, but owing to propaganda by the antivaccinationists, voluntary vaccination is, at the present time, a failure. Owing to this same propaganda, it may be difficult for some time to enact compulsory laws, but we should not despair. By gradually educating the people, the time will come when it will be practicable. In the meantime the physician may do much by insisting upon protection for the infant and later for the child, though one of the greatest drawbacks to leaving this matter entirely to the physician is that he forgets the adult until such time as smallpox threatens.

That vaccination may be used, not only to render the person receiving it immune, but also as a measure of that person's immunity, is not generally known—at least it is not generally practiced. If there remains a measure of immunity from a previous vaccination, as may be noted by the reaction after vaccination, there will be no need to continue to revaccinate this person in the hope of obtaining a "take." Such a person is, at this particular time, immune to vaccinia and therefore to smallpox. How often do we hear parents state that they have had their child vaccinated six or eight times and that finally they had been told the child was immune to smallpox and therefore needed no further vaccination. These parents go away with the impression that this immunity lasts for life, and further attempts at revaccination are given up indefinitely. In such children, the reaction of immunity, to be determined at the first revaccination, should be sufficient. It should be fully explained that, for the present, the child has sufficient resistance against vaccine virus and therefore against smallpox, on account of previous vaccination, but that this immunity is limited, and in time a successful "take" will be obtained.

While not within the scope of this paper, a word relative to the reaction of immunity may not be amiss. For a full description of this and for other references, those interested are referred to the bibliography. The writer is indebted to the authors therein and he has freely quoted from them.

The reaction following the application of potent virus to the derma depends upon the immunity of the subject. Absence of reaction does not indicate that the subject is immune, but rather that the virus is inert. Given a potent virus the reaction in a subject who has not been previously protected, is generally that of vaccinia—a successful vaccination. If, however, the subject has been successfully vaccinated previously, or has had smallpox and still has partial immunity, the reaction is accelerated in severity and the time of its development shortened. The maximum of reaction may in such a case occur from the fourth to the seventh day. This reaction is called vaccinoid, or secondary vaccinia. If the immunity of the subject be very high, the maximum of reaction may occur within from 12 to 48 hours. This is termed the reaction of immunity and persons giving this reaction should be considered immune to smallpox. All vaccinations should be observed in order to note results. In the case of primary vaccination, this may be done at the end of seven days, but revaccination should be observed in from 24 to 48 hours in order to detect, if present, the reaction of immunity. It is useless, in persons who show the reaction of immunity, to revaccinate until this immunity disappears.

SUMMARY.

1. Vaccination and revaccination constitute an almost perfect protection against smallpox.

2. In recent years, there has been a marked increase in the prevalence of the disease, owing to neglect of these procedures.

3. Voluntary vaccination and revaccination fail through ignorance, neglect and adverse propaganda.

4. A model law, identical in all of its features, requiring vaccination and revaccination should be enacted in every state in the union.

5. Pending the enactment of such laws, the medical profession should be active in teaching and practicing vaccination and revaccination.

6. The voters control smallpox; if the majority of these can be convinced, we can do what Germany did—stamp it out.

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ABSTRACT OF DISCUSSION.

Dr. W. W. Waite, El Paso: If someone would attempt to demonstrate that two and two is four, he would be classed as crazy, but some people do not know more than this. It may be that they are

carrying on their activities for commercial reasons. If so, they ought to be in the "pen;" if not, they should be in the asylum. Smallpox can be eradicated. The health department can use such leverage by showing them the cash value placed on human life, and how much it costs the state for one man to get sick with smallpox. It is rather unfortunate that smallpox does not affect hogs and cattle, as it would then soon be eradicated. One way to get control of those past school age would be to require all who were given a poll tax receipt to show a certificate of successful vaccination.

If every case of smallpox that occurred in a community was widely advertised, this might act as a scare to all. At the height of an epidemic is the psychological time to act. It is necessary to educate the physician, sometimes. Before Jenner's time, the only way known to produce immunity was to infect a person from a mild case. This often proved disastrous, because several cases would develop from such inoculations. Experiments at that time were never done as they are today. We now have ways to prove that vaccinations produce immunity. Dr. Tappan has done his share in advocating compulsory vaccination. We are all responsible, and we must work upon this Legislature.

Dr. Malone Duggan, Austin: This paper of Dr. Tappan's should have been given to the whole association and not to this section alone. In 1923 we had 669 cases of smallpox with 17 deaths. This year already there have been reported about 507 cases. In face of these facts, every case should be reported to the department by telegraph. One state had 653 cases to break out at one time, which vaccination could have prevented. We should endeavor to teach the people the importance of vaccination. If we wish any law passed, there is only one way, and that is by legislation. The attorney general himself cannot make any changes in the law. No health department of any city or county can legally make any law or ordinances; only the Legislature can do this, and now is the time for us to act. Many men in general practice do not realize that vaccination is as important in testing out the immunity of people as it is to produce immunity. If we all understood this, it might increase the sentiment in favor of vaccination. Stress should be laid on this point now, so that it will reach the public.

Dr. A. H. Flickwir, Houston: We, in Houston, have just finished with a case in court, in which an attack was made on our school vaccination law. There is a rule in our schools and also a city ordinance which requires children to be vaccinated against smallpox before entering school.

This law was attacked by a citizen of Houston and backed up by the "Health Freedom Law." He attempted to get out an injunction against the school board for not allowing his child to attend school without being vaccinated. When the case was tried, it lasted three days in the district court. Some irregular practitioners were witnesses for the plaintiff, and attempted to prove by the Abrams' method that bovine syphilis could be transmitted from the calf from which the vaccine was obtained via the vaccine point to humans who were vaccinated. Of course, real scientists easily overthrew such arguments, but with some people they may have had a certain influence. If there was a state law requiring compulsory vaccination of all school children, it would greatly assist health officers in enforcing their city ordinances.

Dr. M. W. Brumby, Houston: An ocular demonstration is often all that will wake the people up to the necessity of such things. In 1901, thirty children in a school room in Houston developed smallpox. The disease occurred from the attenuated type to the most malignant form. The epidemic started with the janitor, and occurred among the people that refused vaccination. The school had to be closed and a large number of children were deprived of their schooling, as well as the inconvenience suffered by the city. It was a fortunate circumstance for me, as the health officer, because it was easy after this to persuade the city council to have compulsory vaccination.

R. E. Tarbett, El Paso: El Paso has a vaccination ordinance similar to the ordinance passed by San Antonio, which has been upheld by the Supreme Court of the United States. At present the city is operating under that ordinance and is obtaining a 100 per cent vaccination in all schools, public, private and parochial. To be sure that 100 per cent vaccination is being obtained, arm inspections are made twice yearly by the nurses attached to the health department, and all children are excluded until vaccinated.

The passage of this ordinance was not easy. Publicity and educational work was carried on for some eight months before the ordinance was finally submitted to the council for final passage, and during that time several lengthy hearings were held by the City Council. The fight became so bitter that when the City Council requested army officials at Fort Bliss and the William Beaumont Hospital to appear before the council and give data relative to vaccination in the army, they found that these officers could not appear at the public hearing. Hence, since the mountain would not come to Mohammed, Mohammed went to the mountain, and the mayor and councilmen made a social call on the officers at Fort Bliss and obtained the information which they desired. With the compulsory vaccination of all persons crossing the International Bridge and the complete vaccination of all school children, together with a more or less general vaccination, the smallpox incidence in El Paso has been reduced to an extremely low figure.

Dr. Tappan (closing): My paper was written especially for the general practitioner, to stress the necessity of revaccination at six or seven years of age and again at puberty, and also to call attention to the necessity of a proper vaccination technique.

I also wished to call particular attention to the reaction of immunity. While time does not allow me to go into this procedure, it may be stated, in a general way, that where the immunity of an individual is high (either from a previous vaccination or an attack of smallpox), subsequent vaccinations usually show a prompt, sharp reaction, which reaches its maximum in about 48 hours and may entirely disappear within four days.

According to Dr. S. B. Grubbs, Surgeon, United States Public Health Service, there is redness and swelling along the lines of incision which have received the vaccine, as compared with the control. According to his method at the New York Quarantine Station, three single parallel scratches are made with the point of a sterile needle. These scratches should be three-fourths of an inch long and one inch apart. The scratch should penetrate the epidermis, but not draw blood. The virus is placed on the two outside scratches, leaving the middle scratch as a control. With a sterile toothpick, the vaccine is rubbed into the two outside abrasions, and taking a fresh toothpick, the middle scratch is manipulated in a similar manner, but without vaccine.

The reactions may be divided into four grades, as indicated by 1 plus, 2 plus, 3 plus, and 4 plus. Reactions which do not make their first appearance within 48 hours are not classed as immune reactions. Vaccinoid appears *after* 48 hours. The reaction is less severe and takes less time to run its course than a typical "take." At the New York Quarantine, con-

tacts are released when a satisfactory immune reaction (appearing within 48 hours) has been noted. If the reaction is a vaccinoid (appearing after 48 hours), or a successful vaccination, immunity is considered as established and the danger of smallpox passed ten days after the above mentioned vaccination, or fourteen days from the last exposure to smallpox.

THE IMPORTANCE OF REPORTING COMMUNICABLE DISEASES.*

BY

J. E. STEELE, M. D.,
AUSTIN, TEXAS.

Why is the reporting of communicable diseases of such importance? Because in timely and accurate reporting you are safe-guarding the life and health of our citizenship. In reporting promptly you are promoting the development of a stronger, healthier individual. Strong vigorous health is the chief asset of any person, and the individual is the unit of any commonwealth. Preparedness has come of late to mean much. This word came into prominence during the war, and it secured great force and meaning, and now by timely reporting of communicable diseases we are surely preparing for an effectual suppression of a possible epidemic. "An ounce of prevention is (always) worth a pound of cure," and "a stitch in time (often) saves nine." "Safety first," is always a good motto, and we had better be safe at any and all times than to be sorry afterwards. All of these sayings contain enough truth and philosophy to perpetuate their use.

There never was, and never will be, a place or time that will more effectually demonstrate their meaning and worth than in reporting the first cases of communicable diseases. To be fully prepared to combat a thing, you must have the timely warning which prompt reporting certainly gives. In order to get effectual coöperation, you must educate and enlist the individual doctors of the great medical profession to the importance of early, definite, timely reports, and you must depend upon each other, because the chiros, the christian scientists, and all the irregular hosts and impostors cannot and will not help us in this. The doctors of the regular organized medical profession are the custodians of the public health, and you cannot do effectual work without their full, unselfish, whole-hearted coöperation. Then in turn, each individual ethical doctor should interest, educate and enlist the laity in his respective community. Special stress should be laid on rearing healthy, strong citizens to assume the duties of this grand and glorious country of ours. Once the importance of a perfectly healthy child is realized by the parents, you will have no trouble in securing their most hearty coöperation in bringing to the notice of local authorities every case of communicable disease in their home or community.

True worth is in doing and not seeming, and the reporting, conscientious doctor or citizen is most assuredly the real doer. You can readily conceive of how important the initial case of a communicable disease in any community might be, from the standpoint of being reported. It is not only a great privilege for each one of you to do your bit, but it is also your moral duty. Duty done in anything means victory won. What I mean by timely reports are the very first cases of communicable diseases that occur in any community.

You as health officers, not only have a moral obligation to fulfill in making these necessary reports, but it is also your legal duty, and every time that you fail to make a report promptly, you are guilty of criminal neglect. Sins of omission are just as bad as sins of commission, and when a health officer shows favor to anyone in not reporting a mild case of any communicable disease, in my opinion, he is guilty of willful neglect, because the mild case may be transmitted to others in a most virulent form. He subjects the entire community to the danger of a most serious epidemic, and he should have no self-condemnation resting upon him. The welfare of the many should under no circumstances be sacrificed for the convenience of the first stricken few, which, if neglected, may bring them both to grief and a common grave. "Am I my brother's keeper?" This question should surely be answered in the affirmative by all health officers in regard to reporting communicable diseases.

While I have spoken in general terms of the duty of the individual doctor in reporting the various communicable diseases, a brief review of the present condition will show that greater efforts are necessary. Three diseases may be taken as a basis for deduction; in reality, the number of deaths from typhoid fever, smallpox, and diphtheria should need little emphasis. In the single year 1923, there were 932 cases of typhoid fever, 669 cases of smallpox, and 1,364 cases of diphtheria reported. There were in the same year 316 deaths from typhoid fever, 17 deaths from smallpox, and 189 deaths from diphtheria reported to the Health Department. One can readily see that the ratio between the cases reported in these three diseases and the number of deaths is entirely too low. When a person realizes that there were 3,123 deaths from pneumonia

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with only 898 cases reported in 1923, he needs no stretch of his imagination to see that our statistics are very inadequate.

With this situation before you, you can realize that the state must educate the people to the value of reporting the diseases. Only some central body can cope with this situation, and that body is some branch of the State government. Each city might take very good methods to prevent a disease, but coöperation among all the municipalities or units of the State is necessary. When one city reports an alarming number of cases of any one disease, while another city reports none at all, the efforts of the health experts may be concentrated on that city. For instance, in Austin, an epidemic recently broke out. The health authorities at once concentrated their efforts on this city, and soon managed to stamp out the disease. By adequately reporting the cases, this city soon had the attention of the whole State centered upon it. If this city had acted alone, the disease would in all probability have been immediately stamped out, since the cause for the epidemic lay in a defective milk supply. If the epidemic had been caused by the water of the city, on the other hand, other cities using the Colorado river as a source for their water supply would soon have been affected. By reporting the cases to the Health Department at once, this city took steps which looked ultimately toward protecting the other cities of the State. If the epidemic had been caused by the water supply, the other municipalities of the State would have been immediately warned, and precautionary measures would have been taken. In brief, it is only by the prompt and accurate reporting of the cases of different diseases to the proper central body that adequate and coöperative steps can be taken toward preventing the spread of the epidemic.

Having spoken of the value to other cities of reporting communicable diseases, one may speak from a more hedonistic standpoint, and emphasize the value to the city reporting. If a city or county does desire to spend a little money in this way for the welfare of the State at large, it is making a saving in lives and money for itself. Supposing that every county and State had a county health department, then what means can be taken to compare the relative efficiency of these departments without a complete set of statistics? It is true that different counties are affected by different conditions, but there should be some fairly definite ratio between the efficiency of one county department and the efficiency of some other.

If one county had 100 cases of typhoid and another had 50 cases in 1920, then statistics showing the former county to have only 10 cases and the latter to have 200 cases in 1923 would seem to reflect favorably on one department and very unfavorably on the other. Recognition may be given for efficient service in one case, and proper steps may be taken toward increasing the efficiency in the other. In other words, it is only by comparative statistics of communicable diseases that any city or county can tell whether its "health money" is being spent wisely—whether the health department is functioning properly. If one county shows itself to have a very efficient set of workers, then the methods of that county may be copied to great advantage by the county "which has been weighed in the balance and found wanting." If it is functioning improperly, the loss not only in lives, but even in a financial way, is much greater than the cost and effort of carefully prepared statistics could ever have been.

Since there is such a close connection to the present subject, and even though due emphasis has already been put on the importance, the necessity of a separate county health department may be stressed in this connection. Different cities may report their cases of communicable diseases with almost unimpeachable accuracy. Different communities may even make reports that could not be improved upon. Despite the presence of these conditions, where is the field of one city to leave off and that of another to begin? What cases are to be reported by the health department of one town, and what are to be reported by that of another? These questions would make one immediately realize that some coördination is necessary. Such coördination may be secured by a county health department. This group of workers can see that there is a complete report from the whole county, and that one city's diseases are as accurately reported as those of another. The coördination secured by the efforts of an effective county health department means a great deal toward satisfactory reports to the State Department.

As to what beneficial effects have resulted in those counties which have been reporting their communicable diseases, one cannot speak dogmatically. During the last decade, a great deal of the percentage decrease in the deaths caused by these has undoubtedly been due to discoveries in medical science. Part of the decrease may be due to the education of the people along preventive lines. A great deal of credit may be given to the statistics, however. Those figures which have made scientific deductions concerning the diseases possible, and have caused scientific measures to be undertaken in the right

place at the right time should come in for their share of the credit.

In conclusion, one may say that the importance of proper statistics concerning communicable diseases cannot be over-emphasized. It is generally conceded that the compilation of the statistics is actually a financial saving to the city or county. You, as citizens of the State, should take a broader view. When it is realized that the lives of human beings are at stake and that, indirectly, the proper reporting of communicable diseases causes a marked decrease in the death rate, then and then only, will the people of our State take the proper measures toward reporting the diseases. In this respect, you must work toward the ideal of a State in which every county and city make accurate reports to the State Health Department.

OBSERVATIONS ON THE MENTAL HYGIENE OF CHILDHOOD.*

BY

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HOUSTON, TEXAS.

The status of the mental hygiene in a state can be fairly accurately gauged by the care which is taken of its insane. In fact, in some states that end treatment is the only effort made in the direction of mental hygiene. True to form, we find that in Texas, where the care of the insane is still but little removed from that prevailing in the middle ages, these unfortunates being confined in cells in the county jails, with prisoners acting as attendants, and where our whole system of state hospitals is directly under political control, that the intelligent study and care of the psychological development of the child is sadly wanting. It is encouraging to learn that at one point in Texas a mental hygiene clinic has been established and is doing good work.

Even from the material viewpoint of dollars and cents, the folly of this neglect is obvious when we consider the following of Zabriskie's statistics: that there are in the United States over a quarter of a million insane confined in institutions; that this number is being constantly increased by an annual admission of 50,000 new patients; and that the cost of caring for these is $75,000,000, while the economic loss is estimated at $200,000,000. These appalling figures, however, are a mere adumbration to the stupendous losses which occur as the result of the more common noncommitable cases of epilepsy, feeble-mindedness, the neuroses, psychoneuroses, hysterias and the many other psycopathic traits which prevent an individual from fulfilling a normal existence and carrying out his share of the world's work.

In addition to the monetary loss, consider the heartaches, the wasted lives, the indescribable misery suffered by the unfortunate individuals (and their families) afflicted with the so-called functional neuroses! And then consider that at least some of the main factors in the causation of these conditions are capable of control by intelligent supervision during childhood and the preadolescent period! One of these factors is environment, using the word in its broadest sense to embrace not only satsifactory hygienic living conditions, but also training, example, education, etc. It has long been recognized that it is impossible to consider the mind and body separately; their intimate relations are such that each works both directly and reflexly upon the other, so that in any scheme for the betterment of the mind, the physical development must also receive the most careful attention.

Those malign and beneficent characteristics handed down from our forbears, that mass of inherited instincts, the accumulated experience of generations of ancestors, is, of course, uncontrollable in our present hit and miss system of breeding and perpetuating our kind.

Too much attention can hardly be given to the frequency with which nervous phenomena occur in children, to their recognition, their importance, and finally, to their treatment and prevention.

In any school with a few hundred children, examples of the nervous child can be found, the child who cannot sit still but fidgets continually, the backward child, the morbid liar, the hypersensitive, the egocentric, the bedwetter, the confirmed masturbator, the fearful child, the spoilt, and the problem child. Mild choreiform movements, tics, neuroses, various evidences of endocrine imbalance, hysterical and epileptiform convulsions, and any possible combination of symptoms resulting from a faulty home environment or bad heredity, may be noted. The recognition of the grosser forms of these ills should be easily noted by the teacher, or more particularly, by the district nurses during their periodic inspections.

Nervous children are frequently forward in their studies, which is a source of pride to their parents, who encourage them to exercise their mental rather than their physical powers. This should be rigorously discouraged. I never hesitate to advise complete abstention from school for nervous children. It is a matter of inconceivably small import-

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

ance whether a child reaches high school at the age of 14 or 16, or even later, compared with the risk of growing up with an unstable nervous system. No worse fate could be contemplated for a child than to grow up that despised, uphappy, yet much to be pitied creature, the neurotic.

The postural anomalies of children, both on account of their direct effect upon the health and their reflex influence upon the emotions and disposition, should receive the most careful attention. Among these postural disturbances are stoop shoulders, slouching gait, the "vamp walk" in girls, (often consciously acquired from too frequent attendance at the movies), standing with legs crossed, writhing movements and various uncouth postures assumed while sitting, especially in writing. These conditions are so common as to pass almost unnoticed, and it is unfortunate that so little attention is paid to these conditions in the courses on therapeutics at our medical schools. The inclusion of instruction in medical gymnastics, corrective measures of posture, respiration, etc., would be of decided advantage. The practical psychology of a correct carriage of the body, has long been recognized by all governments in their military organizations. The recruit is taught to hold himself erect, his chest out and his abdomen in, because years of experience have demonstrated that such a posture tends to the production of a courageous, forceful type of personality. The instinctive way in which the body is drawn up in response to the stimulus of a patriotic air or martial tune is familiar to every one.

Great stress must be laid upon the importance of a functionally balanced endocrine system. Children should be carefully examined to determine whether or not their glandular system is working in harmony. Instances of trouble arising from faulty glandular function could be multiplied *ad infinitum*. The hypothyroid and hypopituitary type of child are familiar examples, both starting life badly handicapped. The muscular dystrophies are an expression of imbalance somewhere in the pituitary-pineal-thymus system.

Some abnormalities of the endocrine system predispose to the development of the neuroses. The child's emotional life is conditioned by them. Such is the case, for example, in the child with a hyperactive thyroid-adrenal system. Such a child will overact to any motor or sensory stimulus. He will use up an immense supply of nervous energy, becoming apprehensive, tremulous, easily excited, and in exactly the right condition for the development of a neurosis.

The powerful factor of suggestion in the nervous child is usually employed in the best way to perpetuate the condition which it is hoped to cure. For instance, in the treatment of the bedwetter, he is usually given belladonna; the bed is carefully prepared with water-proof sheeting and newspapers to catch the urine; possibly, the foot of the bed is elevated; the intake of liquid is restricted for hours before bedtime; the child is taken up the last thing at night, and the whole ritual has the effect of implanting upon the child's mind that he is expected to wet the bed—which he generally does. On the other hand, the definite and forceful suggestion that the habit is forever broken by the passing of a small sound a few times, will be found to break the habit like magic. Such parental stupidities as asking the child a dozen times a day if he is telling the truth, naturally impresses upon him that he is expected, as a matter of course, to lie. What effect must be produced upon a child's mind by his parents not playing square with him, by seeing them beat their bills and treat it as a joke, and by seeing in his immediate family losses of nervous control excused, and successful in their purpose?

No suggestion is intended that mental disease is 100 per cent preventable. It is a fact, however, that a few such commonsense measures as outlined above, if carried out, would cut down the percentage of psychopathology enormously.

Can we have any hope for the total abolishment of mental diseases? I believe we can, but it will not be accomplished in our lifetime or our children's. Immense educational strides must be made first among the public, and our scientific knowledge and laboratory technique further improved. I have visioned the only possible system of rational eugenics as a worldwide system of bureaus, in which complete records of each individual, and his physical, mental and endocrine characteristics, would be kept.

Marriage might be continued in its present unsatisfactory form, or modified, but birth control would be obligatory. In order to have a child a license would be required, which would only be issued to those having a minimum of physical or mental handicaps. A study of the woman's ancestral traits would be made, a satisfactory strain of spermatozoa to mate with these found, and artificial impregnation practiced.

This, after all, would be merely a highly scientific elaboration of what the stockmen have succeeded in doing, in building up their stock from culls to thoroughbreds in a few generations.

Incidentally, this would solve the problem of war. Modern wars are all economic in their origin, and by the breeding of supermen and the limiting of their production in proportion to the size of their native territory, no occasion for these futile massacres with which we have found it necessary to decimate the population every second or third decade, would occur.

DILATABLE AORTA.*

BY

J. S. LANKFORD, M. D.,
SAN ANTONIO, TEXAS.

We are painfully ignorant of the earliest beginnings of many diseases, the very knowledge that would be of the greatest real service. Every little point made in early diagnosis is valuable.

It has been my privilege in a large heart work, and a rather extensive experience in life insurance examinations, to make a comparative study of the aorta in both its normal and abnormal condition, during the last twenty years. A number of years ago it was observed that the aorta was unusually dilatable in certain conditions. This subject has been followed closely, and the cases checked carefully, and full records of a considerable number of cases have been obtained, showing the undoubted relationship of this condition to aortic and cardiac disease, and that it is the forerunner of important pathology. The aorta is not dilated, but it yields and stretches abnormally with the rebound of the blood, which is easily demonstrable by several methods. The pulse pressure is of first importance in the diagnosis, its range being from 65 to 90 millimeters. There is no difficulty in differentiating the pulse pressure of this condition and that of pronounced aortic disease that has become aneurismal, or of insufficiency of the aortic valve. In aneurism, it is true, the pulse pressure is high, but the extensive tumor is easily outlined, and the characteristic thrill, murmur, pain, and other secondary symptoms, are present and easily recognized. In disease of the aortic valves with regurgitation, the pulse pressure will run from 90 to 130 millimeters, this wide range being so pathognomonic that the diagnosis of aortic regurgitation may be established upon this finding alone. Then the pallor, the dusky complexion in advanced cases, the characteristic regurgitant murmur, and often a secondary hypertrophy of the left ventricle with mitral regurgitation, all make the diagnosis clear.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 29, 1924.

Nephritis with hypertension is the only other condition that may show a pulse pressure similar to the dilatable aorta. Here the blood pressure may stand 160 diastolic and 240 systolic, a pulse pressure of 80 millimeters, but the differential diagnosis is not difficult. Then, too, the dilatable aorta is usually attended by a low or moderate blood pressure.

In the absence of these diseases, a pulse pressure of 65 to 90 millimeters is due to a dilatable aorta, the result of beginning disease of the aortic structures, and antedates other symptoms and signs by months or years. It is difficult to say thus early whether one or more coats of the aorta are involved and have become weakened. When the aortic valves close the aorta stretches, and the result upon the pulse pressure is similar to that of a leaking valve, but not to the same degree. When taking the blood pressure, the valve can be heard to close with a snappy or booming sound as the blood stream rebounds against it, giving the impression of water forced quickly into a strong but flexible bag. This sound somehow makes one think of the feel of the Corrigan pulse—if sound may be compared to sensation.

Another and a valuable aid to the diagnosis is auscultatory percussion. With the metal bell stethoscope fixed firmly against the sternum between the second ribs, quick strokes are made over the aortic region with the rubber head of a lead pencil, beginning two inches above and to the sides, and approaching the aorta. The percussion note changes immediately at the border of the vessel, and the swell can be made out with fair accuracy, after some experience. This test is not practicable in many cases. Ordinary light percussion is useful, and the fluoroscope is quite an aid in confirming the diagnosis. The differentiated pulse pressure is the main dependence in diagnosis.

Two fairly distinct forms of dilatable aorta, based upon causation, have been observed.

First and most important (because it can be cured and great disaster prevented) is one that, to the clinician's mind, presents unmistakable evidence of "sub-Wassermann" syphilitic symptoms, such as diminished pupillary, epigastric, umbilical, cremasteric, and knee reflexes, especially the latter; vague deep-seated pains and tender spots; increased nervousness and irritability; indefinite impaired health and lack of endurance. There is likely to be dyspnea on violent exertion, and possibly pain in the upper chest. There may be symptoms of disease of the abdominal organs of syphilitic

nature, the stomach, the liver, the pancreas. Arteriosclerosis is not necessarily present. The Wassermann may be positive in rare cases.

This condition occurs after the age of forty-five, when degenerative diseases are beginning or imminent. Proving the cause therapeutically, the condition yields readily to neosalvarsan and the old mixed treatment, or other specific medication, and to the daily application of the slow sinusoidal current for five minutes, preferably with the positive pole over the seventh cervical vertebra, and the negative pole applied to the cardinal points of the heart, especially the base. Left untreated or neglected, these cases have been seen to develop into grave aortic disease. A number of adequately treated cases that have been followed are known to be well after five years. Sixty per cent of all my cases have fallen in this class, and unquestionably, they originated in inheritance, or in acquired infection, unknown or denied. Other blood tests will be discovered that will demonstrate this earlier blood state; the blood has still many secrets to reveal.

The other form of dilatable aorta is one that seems to come from repeated generations of bad inheritance. They are born with a defective cardiovascular system. Outstanding superficial veins spread over the chest, varicosities may be seen between the nipples and the waist line; varicose veins are common; there is a tendency to varicocele and to deep varicosities. Endocrine insufficiency, low blood pressure, impaired function and autotoxemia are found. Calcium deficiency and crumbling teeth are frequently seen. All the vital powers run at a low rate and the patient is always handicapped; he suffers many little ailments, is much subject to "colds," and is unusually vulnerable to common infections. Most of these cases occur after the age of forty. Arteriosclerosis and degenerative diseases are likely to develop early. The myocardium may give way before the aorta in the neglected case and, in fact, cardiac complications of various kinds are prone to develop.

In the first class of cases, if treatment is neglected, the Wassermann may become positive in later years, if the patient survives; in the second class, never. There is a "sub-Wassermann" or syphilitic blood condition which we have no means of discovering except by the very earliest manifestation of suggestive symptoms, but much can be learned clinically by careful analysis. This is surely a syphilitic impairment, but it cannot now be demonstrated. Neither is it very amenable to treatment, because the prime underlying condition of the heart and blood vessels has originated in uterine life and is harder to treat than frank syphilitic manifestations.

Some of the cases, however, are greatly benefited by small doses of mercury and iodides, along with iron, arsenic, and pleuriglandular therapy according to the indications. The slow sinusoidal current is also helpful. The results of treatment are much more satisfactory in the first class of cases mentioned for which we have the well known specific treatment, but these patients readily acquire myocardial impairment later besides grave disease of the aorta and the aortic valves. The prognosis is not very good.

A wide experience has demonstrated the value of recognizing the presence of a dilatable aorta, and especially its importance as an early indication of organic change while it is still possible to prevent grave disaster by suitable treatment.

ABSTRACT OF DISCUSSION.

Dr. M. L. Graves, Galveston: Dr. Lankford, in his interesting paper, has given me a real problem, and one that is difficult to discuss, for it is hard to understand all that is meant by "dilatable aorta." If he considers as a dilatable aorta one capable of enlargement and one capable of change, I should say all are dilatable. If he means a pathological aorta, one calcifying or undergoing sclerosing changes, then it is not dilatable in any normal way. I have more difficulty than Dr. Lankford to really tell by physical examination when an aorta is enlarged or dilated. I do not believe I have the skill to determine this with the pencil method he mentioned. I should think the patient would necessarily have to have a thin chest wall to determine the size of the aorta by such a method. It is even difficult to measure distensibility with the fluoroscope, and this and the radiogram are the best methods we have. In discussing this subject, we must bear in mind both cardiac and central influences on cardiovascular pressure and distensibility of the vessel walls. The doctor mentioned aortic regurgitation and the significance of pulse pressure in making this diagnosis. I must call attention to a toxic condition that gives some of the same symptomatology and pressure differences. Consider such conditions as hyperthyroidism in which you have a large difference in the systolic and diastolic pressures, and this furnishes a wide opportunity for error. Furthermore, what makes an aorta dilatable? Dr. Kühn has set forth the premise that the amount of silicic acid in the coats of the vessel determines its elasticity. Silicic acid and iodine have been combined under the name "najosyl" as an intravenous injection for the relief of symptoms due to this condition. He believes the fact that young persons have more silicic acid in their tendons and vessel walls than elderly individuals may be corroboration of this theory. I believe, therefore, one must regard an aorta that is dilatable, as possessing more or less normal characteristics and one must be very careful in evaluating distensibility or dilatability of the aorta, associated with clinical phenomena, and formulating such an association into a definite clinical entity.

Dr. Lankford (closing): If Dr. Graves will try it out faithfully in a large number of cases, he will find that he can outline the heart and the aorta by pen-

cil percussion. This early indication of aortic disease has been invaluable to me and to my patients. Since writing this article I have had two such cases definitely due to focal infection; one from the tonsils and one from the teeth.

There is just one point I want to make in closing. The cardiovascular system should be considered as one great system of like structure similarly afflicted in disease, and alike responding to remedies to a considerable degree. Sajous told us twenty years ago that digitalis was a heart tonic because it stimulated the suprarenal glands. Taking a cue from that statement, I began the use of suprarenal preparations in the diseases of the heart and the aorta a number of years ago and the results have been remarkably good, especially when given in conjunction with a single blood building pill a day. The long-drawn-out subacute cases without decompensation, yield much better to this treatment than to digitalis. It is very gratifying indeed to see the pulse pressure come back to the normal as the patient returns to better health.

MISCELLANEOUS

ATTENTION ALUMNI NEW YORK SKIN AND CANCER HOSPITAL.

Graduates of New York Skin and Cancer Hospital are requested to send their present professional addresses to the secretary of the reorganized Alumni Association, Dr. Herman Goodman, 15 Central Park West, New York City.

AN APPEAL FOR ENUCLEATED HUMAN EYES.

To the Editor:—Under date of June 2, 1922, I received from Major George R. Callender, Curator of the Army Medical Museum, Washington, a letter of which the opening sentence follows:

"Through conversation and letters of Dr. G. E. de Schweinitz, I have found out about your fine collection illustrating the anatomy and the diseases of the eye, and also of the possibility that you might be willing to present the collection to the Army Medical Museum to be placed in the section set apart for diseases of the eye."

My answer was the immediate surrender of a museum which is the result of thirty years work in ophthalmology. This has been donated without a dollar of expense to the government, and has been given "*summa cum laetitia*"—with great joy—to use the words of Fabricius when he observed the valves in the veins for the first time.

For this ophthalmic museum I have suggested the following divisions: (1) pictorial items; (2) gross dissections (of normal structures) and gross pathology (enucleated eyes); (3) microscopic items; (4) ophthalmic armamentarium, and (5) rare ophthalmic literature.

A plan so ambitious must require time, and the active coöperation of the organized profession. Up to date, this much has been accomplished.

1. Of the 1,000 items visualized for Division 1—pictorial—nearly 960 have been mounted, forwarded and installed in the Army Medical Museum, Seventh and B Streets, S. W. Washington, where they are available for study.

2. The gross dissections and enucleated eyes are being mounted by technicians as rapidly as the shorthandedness of the institution will permit.

3. A few items belonging to other divisions have been forwarded.

My thanks are due to Mr. E. Treacher Collins of London, for the donation of colored pictures of numerous rare ophthalmic diseases; and, in our own country, some of the most valuable contributions have come from Dr. J. Ellis Jennings of St. Louis, who is noted for his skill in portraying diseased eyes.

What has been written is a prelude to this request: That specialists, surgeons and general practitioners —all of whom, at times, perform enucleations— kindly preserve these specimens, and forward them, with proper data, to the Curator, Army Medical Museum, Seventh and B Streets, S. W. Washington, D. C. Such specimens should be immersed, not in alcohol, but in a formaldehyd solution, preferably that of Kaiserling (solution of formaldehyd, 750; distilled water, 1,000; potassium nitrate, 10; potassium acetate, 30).

It is believed that, in the near future, there will be found in Washington the largest and the most useful ophthalmic museum in existence.

In conclusion, I wish to express my deep sense of gratitude for the courtesies extended, and for the coöperation given by Major Gen. M. W. Ireland, the Surgeon General of the U. S. Army, by Major George R. Callender, by Major James F. Coupal, and by the technicians of the Army Medical Museum.

JAMES MOORES BALL, M. D., St. Louis.

—*Jour. A. M. A.*, Nov. 1, 1924.

ABDOMINAL BINDER IN SECOND STAGE OF LABOR.

Alfred C. Beck, Brooklyn (*Jour. A. M. A.*, Sept. 6, 1924), has for several years used the almost forgotten abdominal binder as a substitute for pituitary extract in the second stage of labor. In a search of the literature of the last seventy-five years, he was unable to find more than occasional brief discussions of its use. It is not mentioned in most of the modern text books. Thirty years ago, however, the American Text Book of Obstetrics, in discussing the management of the second stage of labor, stated that: "an abdominal binder is frequently useful in helping the progress of labor during the second stage, particularly in multiparas having lax abdominal walls." The binder is made in two parts. The upper section is a piece of canvas, 29 inches long and 13 inches wide, to each end of which are attached five rings. This is sewed to a canton flannel lining that measures 50 by 13 inches. The lower portion likewise is canvas. Its sides terminate in five tails, at the bases of which are attached five buckles. Part *A* is placed under the patient, and the canton flannel ends are crossed over the abdomen. Part *B* is then laid over these, and the tails are passed through the rings on Part *A*, and fastened by means of buckles at their bases. Thus, this type of binder can be snugly applied to the abdomen of a woman of any size, and can be tightened or loosened as the case requires. When properly adjusted, it holds the uterus perpendicular to the pelvic inlet and prevents distention of the weaker parts of the abdominal wall, thereby increasing the intra-abdominal pressure and making the bearing down effort more effective. The last 250 primiparous deliveries in Dr. Beck's service, in which the use of an abdominal binder is a routine measure, were compared with 250 similar cases in which no binder was used, in order that the value of this measurement might be learned. In the binder series, the average length of the second stage was 68.7 minutes, while it was 101.6 in the other series. The abdominal binder also diminishes the need for forceps. In fact, the number of forceps operations in the binder series was only slightly over half that in the other. Forceps were required nineteen times in the 250 primiparous labors in which a binder was used, while thirty-five forceps operations were done in the 250 in which a binder was not used. The binder, therefore, not only diminishes the number of cases in which forceps are necessary, but also almost

eliminates the need for difficult forceps operations. By shortening the second stage and lessening the need for forceps, particularly midapplications, the infant mortality was diminished. Twelve infant deaths were noted in the 250 primiparous labors in which the binder was not used, against eight in the 250 in which it was used. When borderline dystocia exists, the use of a binder frequently is of great value. Unlike pituitary extract, it tends to prevent rather than cause rupture of the uterus in these cases. The binder likewise is of great value in multiparas with relaxed and pendulous abdomen or marked obliquity of the uterus. Here, it not only causes an increase in the intra-abdominal pressure, but also, by holding the uterus perpendicular to the pelvic inlet, prevents interference with the normal mechanism of flexion. The aid furnished by the binder also permits us to use more anesthesia and makes possible a painless second stage in the majority of cases. The aid furnished by the abdominal binder is passive. It, therefore, is of no value if the patient is too tired to use her voluntary efforts. The increase in the intra-abdominal pressure may affect the child. After each uterine contraction, the lower strap is loosened in order that the fetal heart may be auscultated. If the progress is too rapid, as frequently is the case in the latter part of the second stage, extensive lacerations may occur. Removal of the binder readily corrects this difficulty.

TO ABOLISH LIMIT ON LIQUOR PRESCRIPTIONS.

A suit has been brought in the supreme court of the District of Columbia to abolish the restrictions on the number of liquor prescriptions which a physician may issue to his patients, under the Volstead law. The action is initiated by Dr. William E. Philes, Washington, D. C., and asks for an injunction to prevent Roy A. Haynes, Prohibition Commissioner, and H. M. Luckett, District Prohibition Agent, from limiting the number of prescriptions which Dr. Philes may issue. The complainant alleges that the Volstead Law does "not purpose to regulate the use of lawfully possessed spirituous liquors for medicinal purposes otherwise than under the physicians' prescriptions, nor to regulate the giving of advice in regard to such use." The complainant challenges the right of the prohibition commissioner to restrict the number of patients a physician may treat and questions the authority which limits prescriptions to 100 pint prescriptions to each physician each ninety days.

By refusing to issue prescriptions in excess of that number, Dr. Philes, through his attorneys, T. Morris Wampler and Purcell & Densmore, contends that the defendants are "depriving him of his property without due process of law; depriving him of his right to practice his profession and thus deprive him of the means of earning a livelihood." The complaint further states that: "Based upon his experience, observation and study of medical science, the complainant believes that the use as medicine of spirituous liquors to be taken internally is, in certain cases, necessary for the proper treatment of patients."

The physician then states that he has more than ninety cases each three months which, in his opinion, require liquor in their treatment. To deprive him of the right to prescribe this treatment is an unwarranted interference and "deprives him of his right to practice medicine although duly licensed and admitted to practice in the District of Columbia." Dr. Philes alleges that he has never prescribed liquor as a beverage, but adds: "conceding it to be his duty, intends unless restrained by lawful means to issue prescriptions in such cases, according to his best skill and judgment."—*Jour. A. M. A.*

VICTORIES OVER YELLOW FEVER.

Yellow fever was eradicated from Guayaquil in 1919 and from Peru in 1921. No cases have appeared in Nicaragua or Guatemala since 1921. A few cases were reported from British Honduras in 1921, but the epidemic was rapidly and easily controlled. In Mexico control operations were formally closed in November, 1923. No cases have been reported there since December, 1922, and the health authorities of the Republic have announced that the disease has been stamped out. The disease has now been eliminated from the west coast of South America and from Mexico. On the southern continent there are but two known foci—one in Colombia, the other in northern Brazil—and active work is in progress in both.

Early in 1923 several hundred cases were reported at Bucharamanga, the capital of the state of Santander in Colombia. On invitation from the Colombian Government, experts were sent by the board, the diagnoses of yellow fever were confirmed, and control measures were instituted. The Stegomyia index was rapidly reduced, and new cases ceased to appear; none have been reported since May, 1923. There is every reason to believe that the disease is under control. The survey of adjoining regions has been carefully and completely carried out, and no new foci have been discovered.

A serious epidemic occurred in Ceara, Brazil, from 1921 to 1923, among both foreigners and Brazilians. Occasional cases have been reported from Recife, the capital of the state Pernambuco. In Bahia the disease has been endemic, and during 1923, a total of 157 cases were reported, with thirty-nine deaths.

A feature of the Brazilian campaign has been the presence of Dr. Noguchi during part of the year. He carried on further research in the etiology of yellow fever, demonstrated the presence of *Leptospira icteroides* in Brazilian cases, and showed again the value of the Pfieffer reaction in diagnosis.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Meroxyl.—A mixture containing approximately 50 per cent. of the sodium salt of 2, 4-dihydroxy-3, 5-dihydroxymercuribenzophenone - 2-sulphonic acid, with foreign matter containing ammonium 2, 4-dyhydroxy-benzophenone-2-sulphonate, sodium acetate and water. Meroxyl is a local antiseptic and germicide proposed for use in superficial infections. It is used for wet dressings of wounds, and also for irrigation of wounds and infected bladders. Meroxyl is marketed in the form of tablets containing 0.15 gm. Hynson, Westcott & Dunning, Baltimore.—*Jour. A. M. A.*, Oct. 4, 1924.

Sterile Ampules Mercury Benzoate 2 Per Cent., 1 Cc.—Mercuric benzoate—N. N. R. (New and Nonofficial Remedies, 1924, p. 200), 0.02 gm. (⅓ grain), in a solution of sodium chloride 2.5 per cent., 1 cc. Swan-Myers Co., Indianapolis.

Sterile Ampules Mercury Succinimide, 0.01 Gm. (⅙ Grain).—Mercuric succinimide—N. N. R. (New and Nonofficial Remedies, 1924, p. 204), 0.01 gm., in water 1 cc. Swan-Myers Co., Indianapolis.

Sterile Ampules Mercury Salicylate, 0.065 Gm. (1 Grain).—Mercuric salicylate-U. S. P., 0.065 gm.; benzocaine-N. N. R., 0.02 gm., in neutral vegetable oil, 1 cc. Swan-Myers Co., Indianapolis.

Sterile Ampules Mercury Salicylate, 0.097 Gm., (1½ Grain).—Mercuric salicylate-U. S. P., 0.097 gm.;

benzocaine-N. N. R., 0.02 gm., in neutral vegetable oil, 1 cc. Swan-Meyers Co., Indianapolis.

Sterile Ampules Mercury Biniodide, 0.01 Gm. (⅙ Grain) in Oil.—Red mercuric iodide-U. S. P., 0.01 gm. suspended in pure cotton seed oil, 1 cc. Swan-Myers Co., Indianapolis.

Concentrated Tetanus Antitoxin (Globulin).—Tetanus antitoxin, concentrated (New and Nonofficial Remedies, 1924, p. 297), marketed in packages of one syringe containing 10,000 units; in packages of one syringe containing 20,000 units; in packages of one cylinder containing 5,000 units for intraspinal use; in packages of one cylinder containing 10,000 units with intravenous outfit. Lederle Antitoxin Laboratories, New York.

Antipneumococcus Serum, Type 1.—Antipneumococcus serum (New and Nonofficial Remedies, 1924, p. 304), marketed in packages of one cylinder containing 100 cc. with intravenous outfit; in packages of one vial containing 100 cc. Lederle Antitoxin Laboratories, New York.

Antistreptococcic Serum, Polyvalent.—Antistreptococcic serum (New and Nonofficial Remedies, 1924, p. 305), marketed in packages of one syringe containing 20 cc.; in packages of three 10 cc. vials; in packages of one vial containing 50 cc.; in packages of one vial containing 100 cc.; in packages of one cylinder containing 100 cc. with intravenous outfit. Lederle Antitoxin Laboratories, New York.

Acne Vaccine.—Acne vaccine (New and Nonofficial Remedies, 1924, p. 316), marketed in packages of four vials containing respectively 5, 10, 20 and 40 million killed acne bacilli; in packages of one 5 cc. vial containing 40 million killed bacilli per cc.; in packages of one 10 cc. vial containing 40 million killed acne bacilli per cc. Lederle Antitoxin Laboratories, New York.—*Jour. A. M. A.*, Oct. 18, 1924.

Staphylococcus Vaccine Polyvalent-Lederle.—Staphylococcus vaccine (New and Nonofficial Remedies, 1924), marketed in packages of one 5 cc. vial containing 800 million killed staphylococcus albus, 800 million killed staphylococcus aureus, and 400 million killed staphylococcus citreus per cc.; in packages of one 10 cc. vial containing 800 million killed staphylococcus albus, 800 million killed staphylococcus aureus, and 400 million killed staphylococcus citreus per cc. Lederle Antitoxin Laboratories, New York.

Pneumococcus Vaccine Polyvalent-Lederle.—Pneumococcus vaccine (New and Nonofficial Remedies, 1924, p. 322), marketed in packages of one 5 cc. vial containing 3,000 million killed pneumococci per cc. Lederle Antitoxin Laboratories, New York.

Typhoid Vaccine (for Prophylactic Treatment)-Lederle.—Typhoid vaccine (New and Nonofficial Remedies, 1924, p. 326), marketed in packages of 30 vials; in packages of one 5 cc. vial containing 1,000 million killed typhoid bacilli per cc.; in packages of one 20 cc. vial containing 1,000 million killed typhoid bacilli per cc. Lederle Antitoxin Laboratories, New York.

Typhoid Combined Vaccine Prophylactic-Lederle.—Typhoid vaccine (New and Nonofficial Remedies, 1924, p. 326) marketed in packages of 30 vials; in packages of one 5 cc. vial; in packages of one 20 cc. vial. Lederle Antitoxin Laboratories, New York. —*Jour. A. M. A.*, Oct. 25, 1924.

PROPAGANDA FOR REFORM.

The Therapeutic Use of Digitalis.—The Council on Pharmacy and Chemistry has long held that digitalis effects can be obtained satisfactorily in most instances by the oral administration of digitalis itself, the tincture or the infusion, and that the intravenous administration of digitalis preparations is rarely necessary. However, investigation indicates that digitalis preparations are administered intravenously far more frequently than seems to be demanded. Because of the importance of digitalis therapy, the Council decided to appoint a committee composed of men who have made a study of questions concerning the administration of digitalis, and to request this committee to prepare a report for publication which would set forth concisely the limitations of digitalis therapy and the methods of obtaining digitalis effects. At the request of the Council, Drs. G. Canby Robinson, Paul D. White, Cary Eggleston and Robert A. Hatcher prepared a report. This report brings out the indications for the use of digitalis, the limitations of the drug, its dosage and method of administration. It discusses at considerable length the conditions where the intravenous and intramuscular administration of digitalis may be called for and when the oral administration will be found satisfactory. The report concludes with the statement that the oral administration of digitalis in the form of the standardized powdered leaf, infusion or tincture, meets every requirement of digitalis therapy, with the exception of those relatively infrequent cases in which immediate relief is imperatively demanded, or when nausea or vomiting precluded the oral method, and outlines the intravenous, intramuscular or rectal administration of digitalis bodies when the threatening condition of the patient demands immediate relief.—*Jour. A. M. A.*, Aug. 16, 1924.

Yadil.—This in an international fake of British origin. The advertising campaign for Yadil reminds one of Sanatogen in those palmy days when the public could be persuaded to pay a dollar for a few cents worth of cottage cheese. As Sanatogen was the apothesis of cottage cheese, so Yadil is supposed to be a glorified and esoteric form of garlic. A part of the Yadil advertising campaign is an alleged history of garlic as a curative agent. Just what the theory of its use may be is not clear. Possibly the basic idea is that no self-respecting germ will want to tarry in an organism saturated with garlic. Yadil is put on the market by Clement and Johnson Bros. of London. The concern has a subsidiary company for its publicity, known as the Yadil Press, Limited (formerly called "Quality Press, Limited"). The American agents are E. Fougera and Co., New York. In the British Isles, newspapers and magazines are carrying full page and middle page spreads for Yadil for tuberculosis, for cancer, for scarlet fever, for gonorrhea, and for what-have-you. The British newspaper, *The Daily Mail*, which has refused Yadil advertising, published in its issue of July 22, an exposure of Yadil, written by Sir William J. Pope, senior professor of chemistry in the University of Cambridge. Whereas the manufacturers claim that Yadil is "Trimethanal Allylic Carbide," and declare that it is of entirely harmless vegetable origin, its active principle being natural essential oil of garlic, Professor Pope, after an analysis of Yadil, stated that (1) it is not "Trimethanal Allylic Carbide," (2) that it consists of about 1 per cent. formaldehyd, 4 per cent. of glycerin, 95 per cent. of water and a smell. According to Professor Pope, the smell can be closely imitated by adding to one hundred tons of water, one ounce of oil of garlic. He also discusses the testimonials both from physicians and laymen and shows the utter worthlessness of the testimony. In another article in *The Daily Mail*, Professor W. E. Dixon of the University of Cambridge emphasizes that the basic drug in Yadil is an irritant poison with cumulative effects, and characterizes some of the medical evidence for Yadil as nonsense. —*Jour. A. M. A.*, Aug. 16, 1924.

The Standardization of Drugs Amid Changing Standards.—Medical welfare is hampered in many ways by the machinations of the quack and the health imposter; likewise by the production and distribution of products that are below standard or utterly incapable of accomplishing what the unsuspecting user, be he layman or physician, may rightfully expect of them. Much of the valuable work of the Council on Pharmacy and Chemistry of the American Medical Association consists in revision—in promoting an up-to-date attitude toward well tested novelties in drugs, while preserving a justifiable conservatism toward the valuable contributions of the past. An illustration of the difficulties encountered is afforded by the recent experiences with cod liver oil. The product itself is no novelty, but some of its reputed virtues have been put on a more scientific basis in the last decade. The pharmacopeial standards have been found insufficient. Today it is standardized on its vitamin potency—and more recently on its antirachitic properties. Such tested cod liver oils are widely advertised and have been accepted for inclusion in New and Nonofficial Remedies by the Council on Pharmacy and Chemistry. Those who believe in keeping abreast of progress should, therefore, lend their enthusiastic support to agencies, such as the Council, that labor unselfishly for them.—*Jour. A. M. A.*, Oct. 4, 1924.

Pluriglandular Products of Harrower.—In 1919, the Council on Pharmacy and Chemistry examined a number of the products of the firm of Henry R. Harrower, Glendale, California. It found none acceptable for New and Nonofficial Remedies. An examination of the "literature" sent out by the firm during the last year shows that its business is still largely in complex mixtures such as those reported on adversely by the Council.—*Jour. A. M. A.*, Oct. 4, 1924.

The Photo-Activity of Substances Curative of Rickets.—In addition to conspicuous changes in the composition of bones in rickets, disproportions occur in the concentration of calcium and phosphorus in the blood plasma. The chemical make-up of the latter is soon restored to a more normal character whenever effective antirachitic measures are instituted. Cod liver oil has this regulatory power in a striking degree. It is an extraordinary circumstance that a substance containing neither calcium phosphorus, should have the power to cause the calcium or the phosphorus, as the case may be, to rise nearly to the level commonly regarded as normal. Furthermore, cod liver oil not only acts as a regulator of the calcium and phosphorus metabolism, but also permits the organism to operate with greatly increased economy. No less remarkable than the action of cod liver oil, is the clearly demonstrated potency for this purpose of certain types of radiation, such as are present in direct sunlight and which emanate also from the quartz mercury vapor lamp. Because of the similarity of action of cod liver oil and radiant energy, it was predicted that a connection must exist between them. This relation has now been demonstrated. It has been shown that the chemical substances curative of rickets produce a blackening of sensitive photographic plates screened by quartz. Substances noncurative of rickets do not fog the plates. These phenomena are undoubtedly due to ultraviolet radiation. Thus oxidation appears to furnish the basis for the identical curative action of many substances and of sunlight in rickets.—*Jour. A. M. A.*, Oct. 11, 1824.

New Wilson Remedy Co.—Recently some physicians in Ohio received letters from the New Wilson Remedy Co., giving as its address 1042 St. Clair avenue, Cleveland, Ohio, suggesting they "become interested in getting the profits from medicines that usually go to outsiders." They were informed that it was proposed to purchase the entire formula, stock, name, etc., of the present New Wilson Remedy Co., which now sells "Wilson's Pills," formerly known as "Wilson's Pills of Life" and stated to have proven "very effective" in "Chronic Rheumatism, Lumbago, Neuralgia, Sciatica and Menstruation." "The New Wilson Remedy Company" appears to be a trade style used by one George C. McKay. McKay, it is said, is a sales agent for various concerns and his wife apparently takes care of the mail order patent medicine business. The "Company" merely has desk room at 1042 St. Clair avenue, Cleveland.—*Jour. A. M. A.*, Oct. 4, 1924.

Benzyl Benzoate and Arterial Hypertension.—While the Council on Pharmacy and Chemistry recognizes the existence of honest differences of opinion on many therapeutic questions, and desires to be liberal in its attitude toward all worthy innovations, it refuses to admit claims which are neither in harmony with already accepted facts nor supported by acceptable evidence. The wisdom of this rigorous attitude has been recently demonstrated anew with respect to the widely acclaimed benzyl benzoate. The Council has insisted that its clinical use is still in the experimental stage, despite the alluring announcements of the various alleged virtues of the compound. Benzyl benzoate has, for example, been recommended and doubtless frequently prescribed for reduction of arterial hypertension. A careful clinical study, however, shows that benzyl benzoate, if taken in 25 to 30-drop doses (20 per cent. alcoholic solution), has no effect on blood pressure. Furthermore, even continued therapeutic administration over a period of days produced no effect on the blood pressure of patients suffering with hypertension.—*Jour. A. M. A.*, Oct. 11, 1924.

Some "Mixed" Vaccines of G. H. Sherman Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that the following "mixed" vaccines of the firm of G. H. Sherman were found to be unacceptable for New and Nonofficial Remedies: Erysipelas Vaccine No. 1, Pneumo. Mixed Vaccine No. 6, Strepto. Staph. Vaccine No. 10, Colon Bacillus Combined Vaccine (Modified Van Cott) No. 35, Friedlander Vaccine No. 36, Influenza Vaccine No. 38, Catarrhal Vaccine No. 40, Whooping Cough Mixed Vaccine No. 43. As evidence for these "mixed" vaccines the firm submitted a printed brochure: "Data on the Use of Mixed Bacterial Vaccines." Part of the data consisted chiefly of the reproduction of letters from physicians—some of them men of high standing—testifying to the value of "mixed" vaccines in various conditions. The other part of the data consisted of abstracts of reprints of articles which have appeared in medical publications. This evidence the Council found unacceptable. The evidence for the several vaccine mixtures under consideration did not establish the rationality of any of them. On the contrary, their use is bound to lead to haphazard therapy—particularly so, because the trend of the Sherman advertising which accompanies the products is toward the use of vaccine mixtures. This includes a complete line of Sherman vaccines and contains a long list of diseases with recommendations for the use of vaccines, generally referred to by numbers rather than by names descriptive of their composition.—*Jour. A. M. A.*, Oct. 11, 1924.

Bottled Sunshine.—It was demonstrated recently that sun light or the irradiations of the quartz mercury vapor lamp had the property of emitting ultraviolet rays in common with well recognized anti-

rachitic food substances. Almost simultaneously, it was announced that irradiation of fats otherwise inactive in preventing rickets, caused them to become active and that rations which ordinarily produced wide rachitic metaphysis in the shaftbone of rats through irradiation became antirachitic and promptly effected a rapid and complete healing of the lesion.—*Jour. A. M. A.*, Oct. 18, 1924.

Jack Sprat Bread, Another Obesity Cure Fake.—This bread is put on the market by Charles Sulzer & Co., Chicago, and proclaimed by Sulzer to be "My Magical Discovery." It is said to be "rich in protein" and "unusually low in starch." It is claimed " * * * easily and pleasantly Jack Sprat restores the beauties of form and features." Analysis shows that Jack Sprat Bread has between 29 and 33 per cent of starch and a total carbohydrate content of 36 to 40 per cent. It seems to be a very ordinary product which is a hybrid between a gluten and a whole wheat bread. The statement that the bread is unusually low in starch content is false. It is not true, as claimed, that the obese can reduce by eating all they want, whenever they want it. The claim that "Nothing can reduce you as Jack Sprat will" is sheer quackery.—*Jour. A. M. A.*, Oct. 18, 1924.

Gomenol.—Gomenol is a volatile oil obtained from a plant related to the plant that yields oil of cajuput. It is very similar to oil of cajuput and its therapuetic properties probably are also like it. Gomenol comes as a proprietary from France and it is exploited under extravagant claims.—*Jour. A. M. A.*, Oct. 18, 1924.

Carnrick's Organotherapy.—The G. W. Carnrick Co. sends out a 253-page brochure "Organotherapy in General Practice" which evidently is intended to promote the use of the pluriglandular products which this firm exploits. The following appears under the heading "Insulin in Treatment:" "For the routine treatment of diabetes of the mild or moderately developed type, extending over years, the daily or twice daily injection of an expensive product has failed to meet the requirements. Oral administration appears to be the only satisfactory method for this long continued treatment in the home. Numerous extracts have been prepared for oral administration and have proved successful in reducing blood sugar and correcting disturbed carbohydrate metabolism. Burkeley, Wallis, Achard and others have prepared extracts which gave good results clinically and Banting and Best and Murlin have given experimental evidence of the value of such extracts by administration through the stomach. No pancreas preparation, however, has received as extensive clinical trial as Trypsogen." An insulin preparation, effective when administered orally, would be most desirable. But there is no evidence to indicate that such a preparation has been evolved. The caution still holds good: "It is desirable to give wide publicity to the current limitations of a most promising therapy, since unscrupulous venders of drugs are already attempting to distribute the just-as-good pancreatic and antidiabetic preparations that are recommended for oral use."—*Jour. A. M. A.*, Oct. 18, 1924.

St. James Oil.—For many years one Harry Ellington Brook conducted a department of medical and quasimedical misinformation in the Sunday Magazine Section of the Los Angeles *Times*. Brook was a "Nature Doctor" and a chiropractor. Brook advertised in the Los Angeles *Times* to restore health by natural methods. He was an exponent of drugless therapy, but he was not above exploiting a "patent medicine." A fraud order recently issued by the Postoffice Department against Brook and the "St. James Oil Company," brings out the fact that Brook had for years been engaged in exploiting a nostrum called "St. James Oil," at the same time that he was inveighing against all drugs in his department in the Los Angeles *Times*. Analysis showed the product to be 98 per cent mineral oil resembling liquid petroleum and 2 per cent volatile oils of eucalyptus and of lemon.—*Jour. A. M. A.*, Oct. 25, 1924.

Nicomors.—The Council on Pharmacy and Chemistry took up the consideration of Nicomors, stated to be a medical preparation for the alleviation of the physiologic effects of nicotin at the request of the Nicomors Products Company. Nicomors comes in the form of tablets which are claimed to contain magnesium peroxid and tannic acid as their essential constituents. It is claimed that with the use of Nicomors the effects of tobacco smoking show very little or not at all. It is even claimed that the preparation has a favorable effect on the stomach and the intestines. The Council reports that the claim that the random use of a mixture of magnesium peroxid and tannic acid has a favorable effect on the stomach and intestines, is without warrant, and that the claim that the ill effects of tobacco smoking can be overcome by the use of Nicomors is not credible and not supported by any acceptable evidence.—*Jour. A. M. A.*, July 19, 1924.

NEWS

A New Recreation Building at Abilene Epileptic Colony and a new dormitory at the same institution have been contracted for, the former to cost $41,293 and the latter $34,550. Work on these two buildings will be begun at once.

Medical Care for the Poor.—Formerly, the city of Columbus appointed physicians at a monthly wage to care for the indigent sick within a prescribed area. This plan has been changed on recommendation of the City Health Officer, Dr. James Beer, so that all indigent sick who are able to visit a physician's office go to one of the Ohio State University dispensaries. Those who are confined at home sick will be visited by a representative of the city health department, and if the services of a physician are needed, the family physician will be called and paid by the board of health at the rate of $3 per visit.—*Jour. A. M. A.*, Nov. 1, 1924.

Value of Roentgen-Ray in Diagnosis of Tumors of the Jaw.—The proper technic for roentgen-ray examination of tumors around the jaws, and the interpretation of the roentgenograms are reported by Gordon B. New and Frederick A. Gigi, Rochester, Minn. (*Journal A. M. A.*, Nov. 15, 1924), who find that a roentgenogram is of value in the diagnosis of certain types of tumors found only in the jaws, such as leontiasis ossium, solid odontomas and the cystic odontomas, including the adamantinomas. An expanding unilocular cyst-like tumor of the jaw may be a benign cyst, central carcinoma, endothelioma, giant cell tumor, fibroma, myxoma or cystic odontoma. The varying density and the presence of striae of bone may aid in differentiating these. It may not be possible, from the roentgenogram and clinical history, to determine whether a condition is inflammatory, benign or malignant. Exploration and removal of tissue for frozen microscopic section should be made in questionable cases.

Colonic Anesthesia.—The statistics of 149 consecutive cases of colonic anesthesia with an ether-oil paraldehyde mixture, are reported by Herbert Willy Meyer, New York, and Burtis F. Robbins, Salt Lake City (*Journal A. M. A.*, Nov. 15, 1924). In many instances these cases were far advanced carcinomas,

and were poor operative risks. In such cases Meyer and Robbins believe that colonic anesthesia is ideal. Instances which have been reported as accidents with colonic anesthesia they attribute to some error or faulty modification in technic. Postoperative pneumonia is sometimes seen; this, however, is not the result of the anesthesia but occurs in those cases in which there has been surgical intervention, in the mouth or the pharynx. The two deaths occurring in this series of cases are attributed to suffocation from the falling back of the tongue after the patients had been returned to bed. The authors emphasize that a patient who is still unconscious following colonic anesthesia should not be allowed to lie on his back, and should be watched constantly by a nurse.

San Antonio Medical Arts Building.—San Antonio has under construction a Medical Arts building, at the corner of East Houston street and Avenue E. This building will be one of the finest in the United States, according to a news dispatch. It will be a thirteen-story structure of mixed Spanish-Gothic architecture and crowned with a three-story tower. Beginning on a solid granite base, the first three stories will be faced with ornamental, unglazed terra cotta, above which the walls will be of light colored brick to the tenth floor. The next two stories will be ornamented with terra cotta and the thirteenth floor will be lighted through polychrome terra cotta dormers which pierce the heavy copper roof, which will be finished in Verdi antique. The massive roof will be crested with ornamental wrought iron. The building will be V-shaped, having a frontage of 124 feet on East Houston and 125 feet on Avenue E, with another side of 94 feet, extending in the rear to meet another side of 70 feet running back from East Houston. A court in the rear will render all offices outside offices. Four elevators will furnish service to the building tenants. The upper corridors will be floored with tile and will have marble wainscoating, with ornamental plaster ceilings. This building will contain approximately 90,000 square feet of rentable area which will be devoted exclusively to doctors and dentists. When completed the building will represent an investment of approximately $1,500,000.

Chiropractic and Infantile Paralysis.—Comes to the editorial desk a copy of the De Kalb (Ill.) *Daily Chronicle* for October 25, 1924, containing a brief article, presumably an advertisement, although not so designated, on infantile paralysis. According to the information disseminated by the *Chronicle*, "infantile paralysis is the direct result of nerve impingement somewhere along the contour of the spinal column." Then follows a description of the symptoms that may develop with infantile paralysis, leading up to the suggestion:

"Should you notice any of these symptoms coming upon your child you should converse with a chiropractor immediately. He will adjust the segments of the spine and restore normal nerve supply to the part of the cord affected and reduce the inflammation before any damage has been done."

Presumably, the editor of the De Kalb *Daily Chronicle* would feel aggrieved if, in printing this stuff, he were accused of showing an almost criminal disregard of the public health. What would be thought of a newspaper that would urge parents who had children suffering from diphtheria, scarlet fever, smallpox or some equally virulent disease to take the child to a voodoo doctor or to pronounce incantations over the afflicted little one or to rely on the healing power of a horse-chestnut or a magic ring? Yet none of these suggestions is more iniquitous than that which would lead the public to believe that infantile paralysis is due to the impingement of spinal nerves and can be cured by chiropractic "adjustment."—*Jour. A. M. A.*, Nov. 15, 1924.

SOCIETY NEWS

Bexar County Medical Society met October 9, with 38 members and 4 visitors present.

Resolutions of condolence on the death of Dr. W. F. McManus, were adopted.

Dr. Mary C. Harper read a paper on "Morbidity and Mortality—the Result of Birth Injury." Discussion was opened by Dr. Minnie C. O'Brien, who thought that this paper emphasized the fact that the obstetrician should be with the patient during the second stage of labor and that a routine examination of the fetal heart would show when there was too much pressure on the head. When the pulse goes below 100, delivery should be immediately done. Episiotomy will often do away with from one to two hours pressure on the head where there is a board-like perineum. Several observers have shown that pituitrin increases liability of injury to the child's head by increasing the force of the uterine contractions. Schott suggests giving 5 c.c. of father's blood in all cases of prolonged labor, and repeating in twenty-four hours if necessary. He has shown that the coagulation time of the baby's blood is best on the eighth day and hence advises doing a circumcision at that time.

Dr. O. J. Potthast reported a birth injury in a baby whose pulse suddenly dropped from 130 to 70. The mother was only 18, and this being her first baby, she did not realize the importance of aiding in her delivery. Forceps were finally applied but the child showed evidence of pressure.

Dr. S. R. Kaliski believed that routine spinal punctures should not be done just because blood may appear in the fluid, because this may appear for several days. Any case of cyanosis should lead one to look for meningeal hemorrhage. Prenatal and postnatal care should not be lost sight of, nor the proper application of forceps in cases demanding immediate delivery.

Dr. Lucius D. Hill had seen a child ten days old who had been apparently perfectly well up to that time. He suddenly stopped nursing and later there were twitchings and convulsions. He gave the child some of its father's blood, and stated that he would do a lumbar puncture later.

Dr. Harper, in closing, stated that she had never advised routine lumbar puncture. Those cases with bloody spinal fluid may not show any bulging of the fontanelle. One of the first symptoms usually noticed in case of a brain hemorrhage is the inability or indisposition of a child to nurse, and the internes at the Robert B. Green Hospital were taught to look for this.

Dr. J. A. Nunn read a paper on "Leukemia in Children." He stated that his report was based on 13 cases which occurred among 25,000 admissions during a period of nine years (1914-1923) at Bellevue Hospital. Out of 13 cases, 12 were lymphatic and one myelogenous. Case histories and blood counts were given. In 7 of the cases the spleen was markedly enlarged, in 2 moderately enlarged, in 2 it was palpable, and in 2 not palpable. In 2 cases there was general glandular enlargement and in 6 cases there were hemorrhages from the buccal mucous membrane. The average leucocyte count was 33,000; blood cultures were sterile, and the blood platelet count (made in only one case) was 192.000.

The discussion was opened by Dr. B. F. Stout, who stated that he had seen but one case of leukemia in a child. In this case the leucocyte count was from 15,000 to 20,000, the spleen was enlarged and there were from 8 to 12 per cent of myelocytes. He

thought it hard to conceive of a case of leukemia not having a leukocytosis. He wondered if some of these cases were not those of infection of some obscure nature. Children are particularly prone to lymphatic enlargement from any infection. He had seen a case about 12 years ago with every symptom of leukemia, in which a tonsillectomy entirely cleared up the case. He realized that there may be periods of leucopenia in a leukemia, but could not conceive of a constant leucopenia as reported in some of Dr. Nunn's cases.

Dr. R. H. Crockett stated that it was hard to determine the nature of a leukemia, as it might be an "outlaw" condition of the leucocytes. He had seen a child 8 years of age with 69,000 leucocytes. After *x*-ray treatment the count went down to 15,000, and two weeks later was normal. He had seen 8 cases of leukemia the past ten months, nearly all of which had been picked up by routine blood count. Some cases are benefited by radiation therapy. One case where the patient was very old had an enlarged spleen and a leucocyte count of 100,000. Three *x*-ray treatments caused the count to rise to some 15,000, but a few days later it went down to 26,000 and then to about the original figure, and the patient died. The results obtained in these cases by radiation therapy are variable.

Dr. Lee Rice agreed with Dr. Stout that it was difficult to make a diagnosis of leukemia in some of these cases unless the total count was high. He believed that the routine blood count done by the average technician would fail to pick up many of the early cases that would have been seen by the trained eye because of variations in the different cellular elements. By noting these cellular variations, he considered it possible to diagnose a case of leukemia before the spleen was palpable. The clinician should always aid the laboratory man in every way possible. By giving him case histories, etc., the rapidly fulminating case with hemorrhages and low splenic enlargement should be watched for infection.

Dr. I. L. McGlasson recalled a case of leukemia cutis that he had shown before the society, two years previously. This case developed the skin manifestations after the leucocyte count had been 7,800 for 7 or 8 months. This patient also had a leucopenia for several months. Some authorities placed a great deal of value on the blood platelet count, as a lowering in the number of platelets prevents retraction of the clot, which is necessary to stop bleeding.

Dr. O. J. Potthast stated that Dr. Sere of Portland, Oregon, had found that splenectomy helped to stop profuse bleeding and that in myelogenous leukemia it gave a greater life expectancy.

Dr. Nunn, in closing, stated that the history and blood picture of some of these cases doubtless suggested an infection. In the treatment of the cases he had reported red bone marrow, blood transfusion, general tonics, benzol, and radiation therapy, had been used with little success, as the patients succumbed so rapidly that little opportunity was given for an extensive trial of any one remedy. One must remember that in children the condition seems to be so destructive that there is little time for blood regeneration.

Bexar County Medical Society met October 16, with 95 members and 40 guests present.

Dr. S. T. Lowry read a paper on "Cardiospasm," which was illustrated with lantern slides, demonstrating the extreme value of radiograms in making a diagnosis of this condition. A slide of cancer of the esophagus was shown, which emphasized the fact that in cancer the outlines are usually irregular and moth-eaten. One case with pictures taken at two-year intervals was shown, in which the condition grew progressively worse until dilatation was performed with a complete cure.

Dr. W. E. Nesbit said that cardiospasm was frequently overlooked, although next to cancer of the esophagus it was the most important and frequent lesion of the esophagus. Although nothing definite is known concerning the etiology of the condition several theories as to its causation have been advanced, such as (1) a primary spasm of the muscle; (2) irritation of the vagus nerve, causing secondary spasm; (3) irritation from pressure from without, causing secondary spasm. The Mayo Clinic has divided these cases into two groups. In the first group, the patient has an inability to swallow but the obstruction is not demonstrable under the fluroscope. These patients are very neurotic and yield to rest, antispasmodic treatment, etc. Those cases in the second, and by far the larger, group have not only subjective symptoms but have a readily demonstrable obstruction under the *x*-ray. In this group no result will be obtained from rest, drugs, diet, etc. These cases are usually benefited by dilatation with a hydrostatic bag. Some are cured with one dilatation while others require several dilatations. In cancer the shadow tails out into a ragged moth-eaten outline, while in cardiospasm the ends are blunt and well defined. There are, however, exceptions to both of these rules.

Dr. R. E. Bowen told of a case of cardiospasm which had lost a good deal of weight and vomited all food taken. Examination showed a large uterine fibroid, and upon removal of this the cardiospasm completely disappeared.

Dr. Lowry, in closing, stated that he wished to impress upon the society the fact that the *x*-ray is absolutely essential in a diagnosis of this condition, and that this is one instance in which this method of diagnosis takes precedence over the clinical history. In cases of esophageal obstruction in which the constriction is uniform, the diagnosis of cardiospasm can be made.

Dr. Dalton Richardson of Austin, showed a film which he had obtained from Dr. Gregory Cole of New York, one of the leading roentgenologists in the United States. This splendid motion picture showed the muscular contractions of the stomach and duodenal cap. The film had been so arranged as to be self-explanatory to a large extent, but Dr. Richardson filled in the necessary information and pointed out that the original work done by Dr. Cole showed conclusively that the stomach and duodenal cap were the same etiologically, histologically, physiologically and anatomically. The manner in which this was shown was most interesting.

Drs. Walter L. Garnett, W. H. Beck and H. W. Gough were elected to membership, and Dr. P. E. Cayo was received by transfer from Bee County Medical Society.

Bexar County Medical Society met November 6, with 48 members and 3 visitors present.

Dr. A. F. Clark read a paper on "Nasopharyngeal Fibroma." He stated that this was an uncommon condition and that there was a diversity of opinion as to the proper method of treatment. Although generally agreed that these growths are clinically benign, they occasionally produce death by extension into the skull and by hemorrhage. They have been variously classified histologically. The author stated that he followed the classification of Ferreri of Berlin, who divided these growths into true fibromata which grow fast, are subject to hemorrhage and recur, and the pseudo-fibromata. A case report was given and the patient presented, showing a good result following ligation of the right internal carotid artery and radiation treatment. The patient was a male who was 14 years

of age at the time the growth was first noticed. It grew to a remarkable size, involving the right antrum, extending into the pharynx and producing a bulging of the eye. It had been treated by surgical removal and electrolysis but had recurred more than once, and at times hemorrhage had threatened to end the boy's life. In March, 1921, the artery had been ligated and this was followed by *x*-ray treatment. In the following year the patient had four radium treatments, and eight *x*-ray treatments, the radium being used in pack treatments consisting of 800 mg. hours, at a skin distance of 1½ cm., with filtration of 1 mm. of brass, wood and gauze; three needles were inserted into the growth—a dosage of 80 mg. hours, and a capsule filtered with hard rubber for 200 mg. hours. These treatments were given in such divided doses as was thought normal tissue could stand.

Discussion was opened by Dr. Stout, who considered these tumors peculiar and at times baffling. He stated that the growth in one part might show fibroma, in another fibromyxoma, and in another fibro-sarcoma. He had seen a case recently in which a growth which was thought to be carcinoma was found in a child, but on further sectioning of the growth this proved not to be the case. He drew an analogy between this case and the nasopharyngeal fibromata.

Dr. J. W. Nixon, Jr., reviewed the anatomy of the carotid artery and pointed out certain helps in the technique of its ligation. He advised cutting the artery instead of ligating as there was likelihood of the artery re-establishing itself after the ligatures were absorbed. He also advised ligating the veins.

Dr. C. F. Lehman referred to a report, in a recent number of the *American Journal of Roentgenology and Radium Therapy*, by New and Nigi of the Mayo Clinic, who gave statistics in a series of 32 cases. The average age of these cases was 18½ and the duration of symptoms varied from 3 months to 6 years. They stated that the tumor was more common in the male and that 23 of the 32 cases had been operated from one to twelve times. There were 15 cures reported, 73.3 per cent of which had been obtained before the patient was 23 years of age. The tumor has a natural retrogression at about the age of 25. The high percentage of cures before this age shows that radium is of distinct curative value. This type of tumor is very radiosensitive and the curative effect is obtained by destruction and absorption of the tumor cells and a checking of the nutrition of the tumor by the biological effect upon the internal coat of the blood vessels, thereby serving the same purpose as ligation of the artery.

Dr. J. S. Steele reported two cases, one of which was 31 years of age. He thought that those over 30 were incurable.

Dr. Dudley Jackson asked whether it was necessary to tie the internal carotid artery if radium was used.

Dr. T. J. Walthall reported a case he had seen four years ago, in which a nasopharyngeal growth had been curetted. The patient had a four plus Wassermann and responded nicely to antisyphilitic treatment. He had seen this patient again recently, and he now has a large hole in the side of his nose. Dr. Walthall thought that this patient probably had a nasopharyngeal tumor and syphilis.

Dr. Clark, in closing, advised an *x*-ray examination of the antra to determine the extent of involvement before any treatment is begun. In answer to Dr. Jackson's question he stated that he thought it advisable to ligate the carotid artery where one is dealing with an enormous mass from which danger of marked hemorrhage is imminent, as was the case in his patient.

Dr. F. E. Glauner presented a paper on "Acute Otitis Media." He stated that this diagnosis may be made in acute inflammations, both with and without suppuration. Acute infectious diseases are the most frequent cause of the disease in infants, and acute nasopharyngitis is the next most frequent cause. Pressure of adenoid tissue is a frequent potential factor in children, as is also cold bathing, swimming in polluted bodies of water and putting foreign bodies into the ear. Certain occupations, such as coal-mining and working in the dust, predispose to the condition. The symptoms are attended with temperature, but in adults the temperature may be normal or only slightly increased. There is pain in the tympanum and the hearing is imperfect, especially if tinnitus aurium is present. The duration of the affection varies from one to three weeks. Furunculosis of the auditory canal is to be differentiated. Incision of the drum should be made on the second day and the Eustachian tube should be inflated as soon as the discharge has ceased.

Dr. E. M. Sykes, in opening the discussion, emphasized the points made in the paper relative to inflation and after care. He stated that following an acute otitis media there is often an aftermath of adenoids and catarrhal deafness and frequently a retracted, lusterless drum. He stated that he had seen colitis in children due to acute otitis media and giving no symptoms referable to the ear. In reference to opening the drum, he stated that it was important that it be done intelligently as dislocating the stapes may produce a meningitis.

Dr. F. W. Sorrell said that if a case of otitis media is diagnosed early enough and a paracentesis done, suppuration can often be avoided. He stated that mastoid infections were not seen as frequently in children as formerly, because through the removal of tonsils and adenoids many obstructions in the nasopharynx were avoided, thereby permitting better drainage. He stated that little damage was done to the hearing usually if paracentesis were done early.

Dr. H. P. Hill asked the author if in a child seen for the first time with a red, distended drum but in good general condition, with no temperature, eating well and having no pain, a paracentesis should be done routinely. He had seen many get well without it.

Dr. S. R. Kaliski stated that acute suppurative otitis media was a frequent sequela to scarlet fever during the convalescent period. The question of opening the drums routinely in such cases as described by Dr. Hill, depends upon the whole picture. Where there is fever of obscure origin and the drum is the least bit red, paracentesis often relieves the condition immediately.

Dr. Clark said that in cases of acute otitis media in which he had performed a tonsillectomy and an adenoidectomy, the patients had made a very rapid recovery. He suggested the use of the term "tympanotomy" instead of "paracentesis."

Dr. Glauner, in closing, answered Dr. Hill's question by saying that he considered a case having a bulging drum a definite indication for tympanotomy. He agreed with Dr. Clark that cases having tonsillectomy and adenoidectomy during the active stage of otitis media cleared up quickly.

Mr. D. C. Durham, botanist from Dr. W. W. Duke's Clinic at Kansas City, favored the society with a talk on pollens. He illustrated his talk with lantern slides, showing many of the common causes of hay fever. He expressed it as his belief that the San Antonio territory has a particular pollen problem of its own because of the fact that many plants which were seasonal elsewhere were perennial here, and that this territory had not been thoroughly studied.

Dr. I. S. Kahn made an interesting talk on Pollen Sensitization, in which he stressed the fact that perennial hay fever is possible here from a single plant or from more than one, all pollinating in succession, and stressed the need for a pollen survey of this territory. He has been making a survey himself and recording the pollination of each season. He stated that he had tried to form a coöperative pollen survey with the Medical School at Galveston and the University at Austin.

Drs. J. A. Nunn and Hiram A. Phillips were elected to membership and Dr. G. W. Cross was received by transfer from the DeWitt County Medical Society.

Dallas County Medical Society met October 23, with 46 members and 4 visitors present.

Dr. E. R. Carpenter read a paper on "Localization Tests in Brain Surgery" which was illustrated with lantern slides. The paper was discussed by Dr. W. T. Baker.

Dr. Ramsey Moore read a paper on "Some of the More Common Errors in Infant Feeding," which was discussed by Drs. H. L. Moore, Ralph C. Spence, C. G. Catto and P. E. Luecke.

Dr. Samuel W. Hamilton, director of the Division on Hospital Standardization of the National Committee on Mental Hygiene, was introduced to the society and made a short address on the work of his committee.

Dr. R. H. Milwee announced a three days' clinic to be held by the Dallas County Medical Society, November 5, 6 and 7. The motion was made and carried that Dallas County Medical Society invite the American Medical Association to meet in Dallas in 1925, and that a committee be appointed to confer with the Chamber of Commerce and other organizations of the city in an effort to secure the meeting.

Eastland County Medical Society met in the auditorium of the First Baptist Church, Rising Star, October 28, with twenty-two members and visitors in attendance.

The following program was rendered: Invocation by Reverend R. A. Walker, pastor of the Methodist Church, Eastland; address of welcome, Hon. Lanham Brown, president of the Eastland Chamber of Commerce; response to address of welcome, Dr. J. H. Caton of Eastland; demonstration of the "Schaefer Prone Method of Resuscitation from Electric Shock or Drowning" by Mr. P. W. Campbell, district manager of the West Texas Utilities Company, and several employees; "Periapical Abscesses and Their Relations to General Health," Dr. Clyde C. Craig, D. D. S., Ranger—discussed by Drs. G. W. Griswold and Jos. W. Gregory of Cisco, and W. H. Guy of Carbon; "Recent Developments in the Usages of Insulin," Dr. J. Frank Clark, Abilene—discussed by Drs. W. L. Jackson and C. O. Terrell of Ranger, F. T. Isbell and S. C. Richardson of Eastland, and R. H. Rush of Gorman; "Differential Diagnosis During Pregnancy," Dr. Harry A. Logsdon, Ranger—discussed by Drs. S. C. Richardson of Eastland and E. C. Blackwell of Gorman.

At 6:00 p. m. a splendid turkey dinner was given the members and visitors by the ladies of Rising Star and the Chamber of Commerce.

The next meeting of the society, which will be the annual meeting, and at which time the election of officers will take place, will be held at Cisco, December 11.

Kaufman County Medical Society met in annual session at Kaufman, December 2, at which time the following officers were elected: President, Dr. Fred A. Fuller, Kemp; vice-president, Dr. Robt. E. Myers, Kemp; secretary-treasurer, Dr. D. H. Hudgins, Forney (re-elected); delegate, Dr. Eugene M. Fowler, Forney (re-elected); alternate, Dr. Robt. J. Rowe, Kaufman; censor, Dr. James W. Park, Kaufman.

Lampasas County Medical Society has elected the following officers for 1925: President, Dr. W. D. Francis, Lampasas (re-elected); vice-president, Dr. O. A. Kirby, Lometa; secretary-treasurer, Dr. J. G. Townsen, Lampasas (re-elected); censors, Drs. M. M. Landrum and R. H. Gaddy of Lampasas, and W. A. Whittenberg of Lometa (all re-elected); delegate, Dr. D. W. Black, Lampasas (re-elected); alternate, Dr. O. A. Kirby.

Tarrant County Medical Society met October 21, with 50 members present. A motion was passed that it was the unanimous opinion of the society that the health interests of the city could best be served by having the health activities of the school board under the direct supervision of the city board of health. The motion further provided for the circulation among the doctors of a petition addressed to the Charter Committee, stating that such was the attitude of the society, and that this attitude had been expressed publicly on more than one occasion.

Dr. R. W. Moore presented the case of a boy, 14 years of age, suffering from congenital lues. Instead of the usual interstitial keratitis, there was present a gumma of the iris of the left eye. The case was discussed by Dr. T. L. Goodman.

Dr. L. M. Whitsett reported the case of a patient suffering from a chronic arthritis of obscure etiology. Every test that could be thought of had been made to ascertain the focus of infection, including numerous radiograms. Dr. Whitsett had concluded that the gastro-intestinal tract, particularly the colon, was probably the etiological factor. The case was discussed by Drs. C. F. Clayton, Chas. McCollum and T. C. Terrell.

Mr. Homer M. Stevenson, chemist, read a paper on "Corn Whiskey and Its Constituents." The author's conclusions were based on an examination of 200 samples of illegitimate liquors seized in and around Fort Worth during the past two years. One prominent constituent found was fusel oil, frequently as high as two per cent. However, the toxic alcohol so common in commercial fusel oil was present in only a small amount (20 parts per thousand), while the major part of the fusel oil was made up of isopropyl alcohol, which is low in toxicity. The most harmful constituent found was acetaldehyde, which occurred in from 300 to 400 per cent excess of that found in bonded whiskey. This substance, which was found in every sample of corn whiskey examined, is probably responsible for the majority of symptoms resulting from drinking such whiskey, in so far as those symptoms are not attributable to the ethyl alcohol contained therein. Methyl alcohol was found in only three specimens.

Dr. Ben L. Schoolfield read a paper on "Mobilization of Ankylosed Joints." He stated that the mobilization consisted in the reconstruction of the articular surfaces, with the interposition of some material for the purpose of presenting reankylosis. The material best suited for this purpose is fascia lata transplant. To be of practical value, the arthroplasty must leave the joint with both movement and stability. Contraindications for this treatment are tuberculous joints, multiple ankylosis, too great destruction of bone about the joint, or too great muscular atrophy. Definite indications for the treatment are ankylosis of both hips, both knees, or both elbows; ankylosis of the jaw, and in cases where ankylosis has taken place with the limb in a vicious position. Strict asepsis, careful after-treatment and a high degree of technical skill are necessary for success in this field of orthopedic surgery. The paper was discussed by Dr. C. F. Clayton.

Major E. H. Burgher, inspector-instructor of the Medical National Guard Units, Eighth Corps Area, U. S. Army, was introduced and spoke a few words of greeting.

Tarrant County Medical Society met November 4, with 60 members present.

Mr. D. C. Durham, an associate of Dr. W. W. Duke of Kansas City, read a paper on "The Causative Factor of Hay Fever in this Region." He had just completed a survey of North Texas and found ragweed to be the predominant factor of hay fever in North Texas. The author stressed the importance of an accurate diagnosis followed by more intensive treatment than is the usual custom at present. He presented lantern slides of the different flora that most frequently cause hay fever.

Dr. T. C. Terrell read a paper on "Diabetes Mellitus and the Insulin Treatment." He stated that the etiology of the condition is still obscure but that there is one constant factor in practically all cases—diabetics are either overweight or else they are overeaters. Joslin shows that 60 per cent of diabetic cases show obesity, which is often due to lack of exercise. Allen found that by removing as much as 11/16 of the pancreas, he was able to produce diabetes in all cases, and in other cases where this amount of pancreas was not removed, diabetes was produced upon a high carbohydrate diet. Microscopic examination of the diseased pancreas showed hydropic degeneration of the beta cells of the Islands of Langerhans. Drs. Copp and Barclay have shown that it is possible for these vacuolated cells to recover, provided the cell membrane and nucleus is not destroyed. The importance of these findings show that a diabetic may improve and in time require less insulin for treatment. The patient should at first have a sugar tolerance test made, and any one with a sugar tolerance of 140 milligrams or more should be considered a diabetic. The patient should be taught to examine his own urine and figure his own diet, and also the importance of personal hygiene and the things to do in case of impending coma. In figuring a balanced diet, a good average proportion is 1 gm. carbohydrate to 1 gm. of protein, and 2 gms. of fat. Dr. Terrell stated that it was his policy to place the patient on a diet of 930 calories per day, when beginning the insulin treatment. Should sugar still be present, insulin is begun in doses of 1 to 2 units thirty minutes before each meal, increasing the dosage until the urine is sugar-free. When this has been accomplished, the number of calories the patient needs is estimated. If the patient is young, he needs at least 2 grams of protein for each kilogram of body weight, but if older, one to one and one-half grams per kilo. will be sufficient. At the conclusion of the paper the author presented a series of case reports. The paper was discussed by Drs. Spivey, Whitsett, Hawkins, Covert and Edwin Davis.

Dr. Suggs announced the bimonthly clinic to be held by the society on November 13.

Fort Worth Medical and Surgical Clinics met November 13. The morning was devoted to clinics at the various hospitals of the city, after which a turkey dinner was served by the Woman's Auxiliary in the Tarrant County Medical Society hall. After the dinner a much appreciated musical program was rendered.

Dr. James S. McLester, Professor of Medicine and Dean of the Alabama Graduate School of Medicine, Birmingham, was then introduced and read an interesting paper on "Treatment for So-called Auto-intoxication." This paper enjoyed a liberal discussion.

Dr. Marvin L. Graves, Professor of Medicine, University of Texas, Galveston, read a paper on "Further Studies on the Disorders of the Pituitary Gland," which was discussed by quite a number of those present.

There were nearly 100 doctors present to hear the afternoon scientific program, and quite a number of these were from out of town, some having come from as far away as Clarendon.

Fourth District Medical Association met in Brownwood, October 29 and 30. Eighty-six physicians registered during the two days of the meeting. At the opening exercises, the invocation was pronounced by Rev. C. A. Johnson, and the address of welcome was delivered by Mayor F. S. Abney. This was followed by the address of the President, Dr. J. G. McCall of Brady.

The following scientific program was then rendered:

"Cholecystectomy," Dr. L. W. Pollock, Temple; "Surgical Conditions Due to Changes in the Arteries of the Extremities," Dr. H. R. Dudgeon, Waco; "Classification of Kidney Diseases and Treatment," Dr. C. M. Grigsby, Dallas; "Menstrual Disorders and the Pituitary Gland" (illustrated), Dr. Will S. Horn, Fort Worth; "Some Interesting Clinical Cases," Dr. E. L. Howard, Fort Worth; "Diagnosis and Treatment of Ureteral Calculi," Dr. C. M. Simpson, Temple; "Röentgen-Ray Studies of Renal Calculi," Dr. R. T. Wilson, Temple; "Diagnosis and Treatment of Goiter" (with Lantern Slides), Dr. E. O. Rushing, Dallas; "Lantern Slide Demonstration of the Most Common Skin Diseases," Dr. Bedford Shelmire, Dallas; "Comparative Studies in Leprosy, Syphilis, and Some New Growths of the Skin," Dr. I. L. McGlasson, San Antonio; "Some of the Problems of the Medical Profession," Dr. Holman Taylor, Fort Worth; "Why We Should Support Texas Clinics, and Especially State University Clinics at Galveston," Dr. L. L. Lee, San Marcos; "The Relation of Public Health to the Community," Dr. C. E. Durham, Austin; "Tuberculosis," Dr. S. E. Thompson, Kerrville; Combined Methods of Treating Malignancy," Dr. Dudley Jackson, San Antonio; "Traumatic Lumbago," Dr. O. F. Gober, Temple; "The Use of Iodine in the Treatment of Goiter," Dr. A. C. Scott, Jr., Temple; "Menstrual Disorders," Dr. J. M. Frazier, Belton; "How Can We Shorten the Time and Lessen the Pain of the Second Stage of Labor with the Parturient Women?" Dr. J. G. Townsen, Lampasas; "Drainage," Dr. Jewel Daugherty, Brownwood.

The visiting ladies were royally entertained by the Ladies Auxiliary of Brown County Medical Society. A reception was given the visiting ladies at the home of Dr. and Mrs. B. H. Fowler at 3 p. m. on the 29th, and the following morning they were entertained by an automobile ride about the city, followed by a theatre party. At 8:30 p. m. the evening of October 29th, a banquet was given at the Graham Hotel for all members of the Association and their families and guests.

At the business session, which followed the scientific program, Dr. T. R. Sealy of Santa Anna, was elected president, and Dr. C. L. Lewis of San Angelo, secretary for the ensuing year. Coleman was chosen as the place of meeting for 1925.

Tri-State Medical Society Meeting Postponed.—The meeting of the Tri-State Medical Society, scheduled for December 10-11, has been postponed until January 14-15, due to conflicting dates—so many other society meetings taking place at the time originally scheduled for this meeting. The Tri-State Medical Society meets this time at Shreveport, Louisiana. An unusually attractive scientific program has been prepared, and a number of distinguished guests will contribute papers. The profession of Shreveport have provided special entertainment for those who attend this interesting meeting, and a large attendance is expected.

CHANGES OF ADDRESS.

Dr. P. C. Clements, from Center to Manning.

Dr. G. B. Calnan, from El Paso to Los Angeles, Cal.

Dr. E. M. Wood, from Abilene to Anson.

Dr. Paul V. Ledbetter from Kerrville to Boston, Mass.

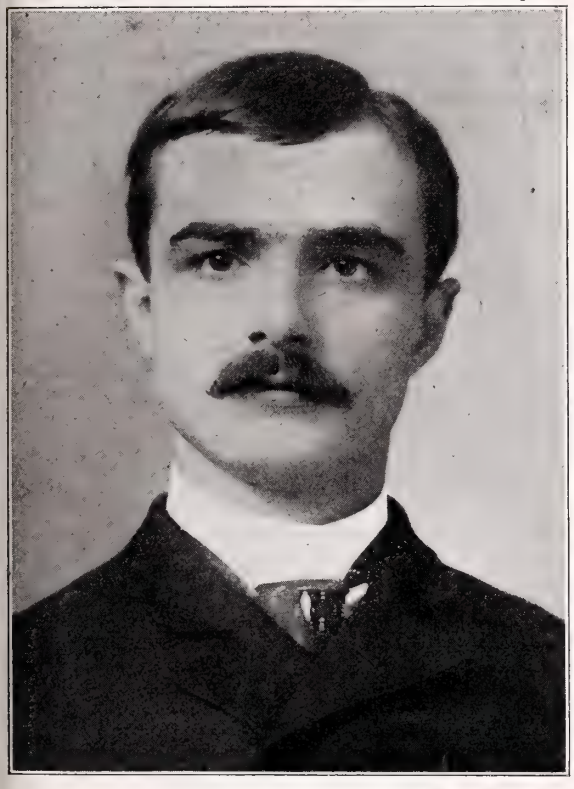
Dr. R. L. LaRue, from Nacogdoches to Mt. Pleasant.

Dr. J. N. Gardner, from Sour Lake to Beaumont.

DEATHS

Dr. Douglas McCardell of Cold Springs, died at his home, October 25, 1924.

Dr. McCardell was born near Livingston, Texas, November 25, 1866. He finished his preliminary education at the University of Texas, and graduated in medicine from Tulane University, New Orleans, in 1889. Following his graduation, he began practicing at Cold Springs, where he built up a splendid



DR. DOUGLAS McCARDELL.

practice and continued to serve that community until the time of his death.

Dr. McCardell was a member of the Baptist Church and of both the Masonic and Odd Fellow lodges. He had been a member of Polk County Medical Society for many years, and one time served as county health officer of San Jacinto County. He is survived by his wife and three daughters.

Dr. Dee Williams of Anson, died June 7, 1924, of cerebral hemorrhage.

Dr. Williams was born in Anson, Texas, April 8, 1879. He graduated from the Anson high school at the age of sixteen, following which he attended Simmons College at Abilene, and later completed a commercial course at Dallas. He graduated in medicine from Vanderbilt University, in 1900.

Dr. Williams was married to Mrs. Fanny Lewis of Thorp Springs, Texas, in 1904, who, together with two sons, Weldon and Grundy, survive him. He took postgraduate work in New York City in 1908, and at Tulane University, New Orleans, in 1916. He was active in civic affairs, being at the time of his death president of the Anson State Bank, a large real estate owner, and interested in other local enterprises. He was a thirty-second degree Mason, a Knight Templar, a member of Hella Temple Shrine, and a member of the Baptist Church. He was a member of the American Medical Association, and had been for many years an active member of his county medical society and State Medical Association.

BOOK NOTES

Amputations, Operative Technique - Formation and After-Treatment of the Stump from the Standpoint of Prosthesis. A study based on Seventeen Hundred Cases of Amputation for Injuries and Disease Occurring in the World War and Since Its Termination. By Norman Thomas Kirk, M. D., F. A. C. S., Major Medical Corps, U. S. Army, Chief of the Amputation Section, U. S. General Hospital No. 3, Colonia, N. J., and Chief of the Amputation and Orpthopaedic Section, Walter Reed General Hospital, Washington, D. C. Published under the authority and with the approval of the Surgeon General, U. S. Army. 8 vo. Cloth. 110 pages, 35 illustrations. Price $5.00. The Medical Interpreter Company, Washington, D. C., 1924.

This timely volume is the result of a very unusual experience with amputations of all kinds and under all conditions. Nothing can furnish such a wealth of material for this purpose as a great war. Most of the patients were gunshot cases, which, as everyone knows, forms the most difficult type of amputation cases because of the almost invariable extensive infection and the presence of a large amount of traumatized tissue. As explained in this interesting work, such conditions, together with the fact that the patients had to be evacuated continuously to the rear, demanded a type of amputation differing materially from the classical amputations which have been copied from textbook to textbook. The type of amputation found to meet this need was the "Flapless Guillotine Amputation." Close attention is given to the details of each type of amputation. After first taking up the general considerations, the amputations of the upper and lower extremities are carefully described. Throughout this treatise the reader is impressed with the fact that the resulting stump must be the most serviceable possible from a prosthetic standpoint. Many surgeons have devised amputations which give beautiful results as far as appearance is concerned and yet the stumps do not have the maximum of function necessary for proper prosthetic appliances. This work should be especially valuable to those engaged in industrial practice where the same requirements for amputation often obtain as following war injuries.

Eat Your Way to Health. A Scientific System of Weight Control. By Robert Hugh Rose, A B., M. D., Instructor Postgraduate Medical School, New York. 12 mo., Cloth, 146 pages. Price, $2.00 net. Funk & Wagnalls Company, New York, 1924.

This book is written for the layman and in language that he can readily comprehend. Ninety-three of its pages are devoted to recipe-menus, of which there are 252. These menus are very different from

the usual ones included in such books on diet in that they contain appetizing foods and foods that can be readily obtained. In the diets for reduction, *the bulk of the meal is satisfying*, while a careful study of the food values entering into this meal will show that it is well chosen for weight reduction. So many diets given for this purpose have been too restricted in quantity, thus not satisfying the patient's appetite and hence making him more liable to break over and eat things not included in his dietary. Diets are also given for increasing the weight and for maintaining normal weight. The book is entertainingly written and should be of considerable value to those who are interested in scientific regulation of the food that they eat so as to furnish the body with the necessary material from which to replace its worn out structures and to furnish the necessary energy for proper bodily function.

Dietetically Correct Recipes for Diabetes and Other Diseases, prepared with plain granulated gelatine. A paper-backed booklet of thirty-two pages, copyrighted in 1924 by Chas. B. Knox Gelatine Company, Johnstown, New York.

It is for the first time that a booklet of this character has been reviewed in these columns. While the booklet is obviously prepared as an advertisement for a particular variety of gelatine, it is believed that any one interested in the dietary of those who are in ill-health, will find the pages of this little book quite interesting. The recipes have been most carefully worked out and with each recipe is given a quantitative analysis of the carbohydrate, fat and protein content, and the caloric values. There is an important chapter in the book by T. B. Downey, Ph. D., Fellow at Mellon Institute (Pittsburgh), on the value of pure, unflavored gelatine as a protective colloid in the modification of milk in infant feeding, which in no way changes prescribed formulas. Dr. Downey has determined by standard feeding tests that the addition of 1 per cent of gelatine to a quart of milk increases the yield of nourishment by about 23 per cent. The book will be mailed upon request—postpaid and free of charge—by the Charles B. Knox Gelatine Company, Johnstown, New York, to any physician or dietician.

The Anatomy of the Nervous System from the Standpoint of Development and Function. By Stephen Waster Ransom, M. D., Ph. D., Professor of Anatomy in Northwestern University Medical School, Chicago. Second Edition, Revised. 421 pages; 284 illustrations, some in colors. Octavo, Cloth. Price, $6.50 net. W. B. Saunders Company, Philadelphia and London, 1923.

This valuable textbook of the anatomy of the nervous system has been written especially to teach the medical student the functional significance of the structures being studied. The text is clear, accurate and entertaining. The second edition does not differ greatly from the previous edition published in 1920. We found no changes in the text until page 293 had been reached, when a paragraph on the visual centers is introduced. Most of the changes in the text begin on page 363, when considerable new material is added, as evidenced by the fact that the first edition contained 395 pages, whereas the new edition contains 421. Most of the additional pages are made up of a careful study of the blood supply of the brain, which is illustrated by beautiful three-color engravings, and the discussion of twelve clinical cases selected to illustrate the functional significance of parts of the nervous system, which have been added to the "Laboratory Outline of Neuro-Anatomy." The work concludes with an extensive bibliography.

First Steps in Organizing a Hospital. An Exposition of Ideals and Principles Incident to the Inception and Organization of a Hospital. By Joseph J. Weber, M. A., Editor, *The Modern Hospital.* 12 mo., Cloth, 205 pages. Price, $2.75. The McMillan Company, New York, 1924.

The introduction to this book is largely statistical, giving the ratio of the number of hospitals to the population in different states in the Union, and also the ratio of hospital beds to the population. The first chapter is devoted to advice as to the method of conducting a survey of a community to establish whether a hospital is needed or not, and what kind and size of hospital, if one is found to be necessary. The following chapters are devoted to organization of a hospital, duties and responsibilities of the board of trustees, suggestions on the financing of a hospital, and the organization of auxiliary bodies. In the appendix may be found model constitutions and by-laws and articles of staff organization, as well as other valuable data. Mr. Weber writes from a broad experience and not from a theoretical standpoint and hence his work is intensely practical and should be of great value to any person or community contemplating the organization of a hospital.

Medical Gynecology. By S. Willis Bandler, M. D., Professor of Gynecology, New York Postgraduate Medical School and Hospital. Fourth Edition, Thoroughly Revised. Octavo of 930 pages, with 157 original illustrations. Cloth, $8.00 net. W. B. Saunders Company, Philadelphia and London, 1924.

This work on gynecology is a pleasing departure from the time-honored treatises on this important subject, many of which bear a strange similarity to texts that have preceded them. A great deal of useless material which has formerly been included in work on gynecology, has been omitted and the subject is approached from the standpoint of modern therapeutics. In the preface to this edition the reader is told that the chapter on urinary conditions has been written by Dr. Walter T. Dannreuther, the chapter on constipation by Dr. George Mannheimer, and the chapter on syphilis by Dr. Walter Highman. Of especial interest in this work is the full discussion of the endocrine glands and their disorders as relate to diseases of women. The newer methods of diagnosis. such as the Rubin test to determine the patency of the fallopian tubes, the employment of the cystocope, etc., are given, as well as modern and carefully worked out methods of treatment. The fact that this work has been reprinted seven times since it was originally copyrighted in 1908. attests to its worth and popularity.

An African Holiday. By Richard L. Sutton, M. D., LL. D., Fellow of the Royal Geographical Society of Great Britain. Octavo, Cloth, 180 pages, 102 original illustrations. Price, $2.25. C. V. Mosby Company, St. Louis, U. S. A.

We have read with profit essays from the pen of Dr. Sutton of an entirely different character from the above unusually entertaining volume. The story of how Dr. Sutton spent a vacation trailing rhinos through the brush and laying in wait in bomas for the king of beasts while the king of pests (the man-eating mosquitoes) lay in wait for him, will, I am sure, be read with great interest by anyone who is fond of true sport. The droll humor that pervades the book shows Dr. Sutton to be a good humorist as well as a good shot. The binding is attractive, the type large and the illustrations are as beautiful as they are unusual.

Texas State Journal of Medicine

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Vol. XX **January 1925** **No. 9**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Happy New Year!—According to Webster's Unabridged Dictionary, happiness means: "Good luck; good fortune; prosperity." The definition is extended somewhat, as follows: "A state of well-being, characterized by relative permanence, by dominantly agreeable emotion ranging in value from mere content to positive felicity, and by a natural desire for its continuation. Mental and moral health and freedom from irksome cares are its normal condition." That is our New Year message to our readers, advertisers and well-wishers. Much writing could not state it better. It is surprising, sometimes, to realize the full meaning of mere words. Perhaps that is the incentive in the cross-word puzzle game.

There is such a thing as luck, and by the same token there is both good and bad luck. Every crap-shooter knows that. The turn of the dice indicates neither skill nor power, and while the losses and gains in the game of dice are subject to mathematical calculation, the incidence of loss, or of gain, at any particular time is not controlled by anything that we can imagine. Some lives are not long enough to reach the turning point in the lane, and either good or bad luck persists until the end, with little variation. For this one year, at any rate, we wish our friends a preponderance of good luck and good fortune. Riches often lead to moral disaster; prosperity never does.

A merely prosperous people are good-natured, good-humored and active in well-doing. To wish our neighbors prosperity is not altogether an unselfish thing to do. The most resourceful and competent individual is the one who is free from financial worries. A prosperous medical profession will render due return on its responsibilities. We wish the fullest measure of prosperity for our fellow workers in the great field of medicine.

Good health is the basis of that state of well-being so assiduously sought by all of us. There is a difference between "well-being" and "kick." The physically and mentally abnormal desire the latter; they think they want the former. Alcoholic beverages, nar-

BEYOND THE PROFIT OF TODAY.

Lord, give me vision that shall see
Beyond the profit of today
Into the years which are to be,
That I may take the larger way
Of labor and achievement; so
Help me fashion, staunch and sure,
A work my fellow-men shall know
As wrought to serve—and to endure.

I seek for fortune, Lord, nor claim
To scorn the recompense I earn;
But help me, as I play the game,
To give the world its just return.
Thou mad'st the earth for all of us,
Teach me, through struggle, strain and stress
To win and do my share, for thus
Can profit lead to happiness.

Guard me from thoughts of little men
Which blind the soul to greater things;
Save me from smug content and then
From greed and selfishness it brings;
Aid me to join that splendid clan
Of business men who seek to trace
A calm, considered working plan
To make the world a better place.

BERTON BRALEY, in *The Nation's Business.*

cotics and a variety of practices denominated by us as abnormal or improper, are presumed to produce a state of well-being, or a kick, and there are those who desire these things above life itself. They are sick, and generally do not know it. We have seen such as these in almost every degree. It is a mistake to desire any sensation for itself alone. The sensation of well-being will conduce to greater deeds and to the joy of accomplishment. It is that we desire for our friends.

Mental and moral health tell the story. Few cares are irksome to us if we are mentally clear and morally free. May we have a full year of just that; and then if we are not better doctors, more worthy citizens and greater producers, may the dice turn against us!

We are sorely beset at times by the uncertainties of this day of unrest, and by the troubles that immediately confront us. We do not realize as we should that progress is in cycles. The depressions of today may serve to bring out the high lights of tomorrow. We should be able to visualize the future, and should strive to do our part in completing the present cycle, whatever it may be. Ours is the most noble of callings, and it is noble in the proportion that it is unselfish. While we strive to unselfishly serve our people, we should not scorn the laborer's hire, nor should we pretend to do so. If we will be patient and kind, although persistent, we can gain our way through the crowd without injury or offense to our fellow-strugglers, provided we are all headed in the same direction. If we should find ourselves struggling contrariwise, it is quite possible that we had better turn around and go the other way. That is exactly the trouble now. There is too much doubt as to direction, and the current has turned to breakers. The breakers will again change to current when the shallow places have been passed. May the present year find us moving forward smoothly, and

Here's to the jolly New Year
And the wise Old Year at the gong,
May the wise Old Year tell the jolly New Year
What t'ells gone wrong.

Better Times Predicted.—We are in receipt of some very encouraging statistics relating to good times, from the American Institutional Service of Chicago, which we understand is a perfectly reliable financial concern, and we are constrained to add our influence to the movement tending to bring about the necessary psychological setting for that gem of the purest ray serene, "normalcy," for which we have long been looking. Business is very largely based on confidence, and where there has been much disturbance there has been much doubt. Universal belief in prosperity will help to insure prosperity, although it will not make it. The report before us makes the following significant statement:

"Notable among the favorable factors in this review of recent business operations are increasing exports, decreasing business failures, an increase in freight car loadings and a decided gain over the late summer steel and iron output and activities. Probably the most unfavorable element is found in the decrease in railway gross earnings as compared with a year ago, although operating expenses record a still greater decrease, resulting in only a small decline in net operating income."

It will be noted that the unfavorable elements worthy of mention have to do with railway earnings, and that the loss there is small. Doubtless a large part of the loss in this regard can be accounted for by the rapid increase in the business of commercial truck lines, in short haul business. We are not thinking of the problem in the light of the interests of any corporation, but rather as the success of enterprises tends to indicate the arrival of good business.

We note that the eight leading mail-order and chain-store corporations, have enjoyed material increase in sales during 1924 over 1923; that bank clearings for September, which is the last month for which figures were available, exceeded the clearings for the same month a year ago, by 9 per cent; that there is an increase in exports, figured on the same basis, of 12 per cent; that dividend and interest disbursements have increased 26 per cent; that the amount of paid up life insurance is 2 per cent more than it was a year ago, and that building operations have increased nearly 1 per cent.

The report refers to money in the thousands of millions, which is considerably beyond our depth, for which reason we speak in most general terms. As already stated,

our purpose is to encourage our readers and urge them to contribute to the stabilizing influences now at work. Normalcy, we hope it is you, and that your first name is Prosperity!

Medical Fees.—There has recently been much, and fruitless, agitation in the lay press over the action of the Medical Society of the District of Columbia in adopting a schedule of fees for medical service. It seems to be practically impossible for the lay press to grasp either the refinement of medical ethics or the peculiar factors covering the economics of the practice of medicine. Perhaps that is to be expected, in view of the great preponderance of affairs pertaining to commerce and the crafts, to be considered in the daily newspaper routine. We feel that there is no intention on the part of the lay press of treating the medical profession unfairly, notwithstanding the too frequent diversity of opinion in regard to the character of advertising carried by the newspapers, and the careless manner in which information covering alleged medical discoveries is given out in their reading pages. Indeed, there are newspapers which endorse heartily the attitude of the medical profession in regard to medical advertising in particular and medical publicity in general, and some of the most impressive discussions of quackery and its harmful effects that we have seen, have appeared editorially in newspapers which differ with us in regard to both advertising and medical reading matter. And for fear that we may be misunderstood here, we will say further that there are newspapers which do have an understanding and regard for both medical ethics and medical economics, in common with the medical profession.

We do not know whether, in fact, the District of Columbia has adopted a fee schedule, and if it has, just what its provisions are. Chances are, its members were endeavoring to come to a common understanding in regard to these matters, as much in the interest of the laity as of the profession, and that the schedule adopted was merely something upon which to base negotiations for medical service. However, the issue is whether doctors have a right to agree on the value of a service which even the most violent dissenter must recognize as strictly personal, and one involving both knowledge and skill. It does not seem to have occurred to any of our critics that to a large extent the same factors obtain in the rendition of medical service as in the production of fine art, whether painting or sculpturing, or what not. It would not be contended that the painter must not charge beyond a specified price for his creation, and that he should not be allowed to sell his services to those who are in a position to buy them at top prices. Most laymen will agree that the returns to the artist should be limited only by the number of persons who appreciate art, and by their ability to pay. A painter can produce but one piece at a time, and it is sold for a price. The musician can serve a large group at a time, and those who hear are required to pay in accordance with his attainments and their regard for his production. If he had to sing for his audience one at a time, his prices would be much higher, and his services would be rendered under comparatively the same conditions as those of the painter.

The service of the physician is individual, and it is up to him to make his living in the light of that restriction. He must charge, however, somewhat on the same basis as the painter charges for his paintings, and in accordance with his opportunities for patronage. If his knowledge and skill in the practice of medicine has reached that degree which sets him aside from his fellows, surely he is entitled to practice on a selective basis. He does not always, as all will agree, do this. We think it is a general rule that the services of even the most renowned physicians and surgeons are rendered to rich and poor alike, within the limits of practicability. It would seem to be nothing but fair to agree that those who are able to pay should be utilized to equalize a service which is rendered in the interest of humanity. We will agree on our part, that there is a limit to the charges that should be made for services, even under these conditions. It is the principle of the thing that is under fire and not so much the facts involved. Indeed, that is one of the main reasons why it seems desirable to adopt a fee schedule, which, so far as we know, always is a "gentleman's agreement," and not

a fixed rule, as at least one of our critics advises should be the case.

The *Dallas News* editorially criticized the District of Columbia Medical Society, and all and sundry who would attempt to fix the fees for medical service, and in doing so, completely missed fire in a number of important particulars. The assertion is made that physicians assume the position that it is nobody's business what they charge for their services. That is not true, and it is for the reason that it *is* the business of others that physicians have attempted to come to some reasonably well-defined conclusion as to what the limitation of charges should be under ordinary and at the same time conceivable circumstances. One cannot always argue with a prospective patient concerning the fee to be charged for service about to be rendered. That would be an indelicate thing to do, and perhaps there would be no time for it. Mr. "Mawruss Perlmutter," in discussing this subject, urged that in most cases the ether is given to the patient at the wrong time. He said that it "ought to be administered after they leave the hospital, when the doctor presents his bill, because before they go into the hospital the doctor is too kind-hearted to tell them what he is going to charge, and they are too chicken-hearted to ask him."

The *News* urges that the necessities of life should be exempt from organization demands, and that "union labor in a strike has no right, for example, to starve a population or endanger its health." Not admitting the right of the public to compel union or any other kind of labor to do any particular work for any particular people, we will insist that the two situations are not at all comparable. The medical profession has never in the history of the world refused to serve in matters pertaining to public health, and it has generally served without pay, in addition to which, the charges complained of are for personal services and not public services. If the prospective patron does not like the prospective price to be paid for medical service, he can go elsewhere and get service, or he can, as a rule, do without it. It might well be asked what he would do if there were no doctors. Which state of affairs it seems to be the earnest desire of many persons to bring about.

Truly, as the *News* states, the good will of the public is essential if big business is to thrive; *but the practice of medicine is not big business and never can be.* It is a personal service, and the physician is dependent upon his own personal worth for his employment. It is true that the public, because of its misconception of conditions surrounding the practice of medicine, frequently fails to give support where it should be given, and to a large extent looks upon the medical profession as being selfish in its demands, notwithstanding the fact that the whole history of medicine is demonstrably to the contrary.

The *News* sagely remarks that the doctor will find it necessary to learn that the size of the fee to be charged has no direct relation to the size of the patient's pocket-book, and that the skill of the physician is the true measure of the value of his services. We will agree to that, if our critic will agree that we have the right to dispose of our services to the highest bidder, and we will offer as good measure to agree that in doing so we will always consider the dictates of humanity. We will agree further, that "true professionalism ought to eliminate both fee-cutting and fee-boosting." The threat that "collective enterprise by health insurance or community medical service" will intervene if we are not careful to conserve the good will of the public, is a real one, and we are fully advised. We appreciate the following conclusion to the editorial in question:

"As a general rule the physician is an unselfish, patriotic and enlightened citizen. In times of epidemic and catastrophe he is among the first to aid. At all times he is disinterestedly ready to further preventive measures against disease, although he makes his living from those who fall ill. At many another point the profession as a whole has from the beginning held high and respectable ground. But the doctor is at his noblest when he is a servant of the public good. And he is at his poorest when he forgets that fact."

The *Houston Chronicle,* in a rather facetious editorial, also undertakes to criticize. In a later discussion, the *Chronicle* agrees that doctors have the same right to fix their fees, usually granted to plumbers and carpenters, and concedes that the doctor is just as necessary to the health of the community as the plumber. The editor recites the great amount of charity work and free work for the public health interests done by the medical profession, and does not find it in his heart to criticize if the rich are made to pay the difference, assuming that if the rich do not understand the basis on which charges for services rendered are to be based, that is the fault of the rich, and there can be no criticism any more than there could be if any other purchase were made without such understanding.

A correspondent in one of the papers, urges the alleged custom in China of employing physicians to keep the people well, stopping pay when they get sick, as a cure for the practice of overcharging, ignorant of the perhaps important fact that no such thing is done, and the further fact that if such procedure were adopted it would be necessary to

give the physician authority to compel observance of certain hygienic and sanitary rules.

Another correspondent bases his criticism on the assumed fact that both lawyers and doctors are educated at public expense. That would be poor argument if it were true, which it is not, any more than is the case in other educational lines. The banker, the merchant and the artisan who have been educated in state, or endowed schools, are as much obligated to render service as are the doctors who have received their medical educations in the same sort of institutions. There is a difference, of course, but not such as would make a material difference.

Another correspondent urges that the physician has no more right to make special charges, differing according to circumstances, than a railroad has in the matter of fare. This erudite gentleman entirely overlooks the fact that the prospective passenger who desires special service pays a special price, and that in no instance is the service thus purchased a purely personal one, or dependent upon extraordinary knowledge or skill. If this correspondent wants to get a thrill, he should ask the railroad company to carry him from one town to another in contravention of schedule and alone.

One editor urges that the practice of charging in accordance with the ability of the patient to pay is not right and cannot be maintained in the courts. Quite likely, and fortunately, this editor is mistaken, in both instances. A fee wholly unjustified by circumstances cannot be maintained in court, no matter what the claim. As we have said, we do not endorse the practice of charging exorbitant fees for medical or any other service, except the service is agreed to in advance and is entirely satisfactory to all parties concerned. We think it utter folly for a wealthy man to pay a million dollars for a painting, but it is his affair and he can do so if he will, and certainly the owner of the painting has a right to the million dollars if the purchaser is willing to pay it.

The observation of one editor that a loaf of bread cannot at the same time be priced 10 cents to a ditch-digger and $100 to a rich man, is almost as ridiculous as a story we heard some years ago. A farmer boy was selling potatoes. A traveling man, thinking to have some fun with him, inquired the price of the potatoes. When told that they were 40 cents per bushel, he remonstrated with the boy, saying that they were paying $1.00 a bushel for them over in his state, some hundreds of miles away. The reply was that a bucket of water in Hades would be worth a thousand dollars, too.

We respectfully insist that the press can safely postpone action in the case of the medical profession until some of the more pressing problems of the same sort in other directions have been attended to.

More Reaction to Our Publicity Campaign.—Last month we undertook to discuss, quite briefly, the reaction of both the medical profession and the lay public to our educational and publicity campaign, and it seems that we have piled up trouble for ourselves. Were it not for the seriousness of the situation we would not appear thus to be engaging in a controversy over our accomplishments in that particular undertaking. Having been somewhat prominently concerned therein, our native sense of modesty would prevent us from claiming great success, and being rather inhibited in such a discussion by the generally accepted principle that a good leader does not needlessly disclose his plans, purposes and accomplishments to the enemy, we could hardly expect to do the subject full justice. The truth of the business is, we will simply have to ask our members to consider that there is much that should not be said publicly, and that a little faith in leadership goes a long ways toward success in any directed movement.

Our frank admission that our members did not seem to feel that our campaign had reached many people and for that reason had not been particularly productive of practical results, seems to have been taken as an assertion aside and apart from the balance of the sentence, to the effect that it was likewise agreed that the effort was worth while and should be continued. We further asserted that after some discussion it was usually agreed that the mere fact of the effort had had a wonderful effect on the thinking public, and that definite good results would eventually be obtained.

We have received numerous letters concerning this campaign and its connection with the increase in dues. It seems that, for some reason, the opinion is prevalent that the increase in dues was made solely to carry on the publicity and educational campaign. This is distinctly not the case. As we have said before, $1.00 goes to Medical Defense, $2.00 to the JOURNAL, and $12.00 into the general fund, from which it will be appropriated by the Board of Trustees to the several activities of the Association and in proportion to their needs. We believe it will be generally conceded that our Board of Trustees cannot be stampeded into senseless expenditure of money. If the Council on Legislation and Public Instruction can show that it can render due returns on the investment, it will get all

the money the Association can afford, always bearing in mind the relative importance of the projects to the other affairs of the Association. We might go further and say that the pet project of the Board of Trustees, as the Board is now constituted, is a permanent home for the Association, for which purpose our surplus is being increased beyond the mere necessities of good business.

A well wisher of the Association criticizes rather forcefully, albeit pleasantly, the publicity campaign. He acknowledges that the public needs the education and that the physician must do the educating, but insists that there is a divergence of opinion as to how best to do this. He agrees that the message has reached a good many people and that good results in a political way have been attained, but doubts whether the game is worth the candle. He makes several suggestions, somewhat as follows:

(1) That physicians should take the time and trouble to explain to their patients individually what it is we have in mind, and the purpose of the whole movement. He admits that physicians generally do not know exactly what to say, which is a distinct handicap. We may say that one of the principal objects of the speaking campaign put on last year was to educate physicians to do this very thing, and it is to be hoped that they will take the matter to heart and proceed accordingly.

(2) *Hygeia* is urged as a most important link in the chain of public education on medical and health matters. Each speaker who took the platform in this movement was urged to place *Hygeia* before the public, and the Council plans to make appropriation for subscriptions to *Hygeia*, to be placed where they will do the most good. Indeed, it was intended to place *Hygeia* in the hands of each member of the Legislature, as an educational procedure, but the uncertainty of the financial support for the future has served to defer that project somewhat.

(3) The preparation and publication of articles on health subjects in selected lay magazines is urged. That is one of the cherished plans of the Council. It is already partly in operation, and more extensive and expensive plans will be perfected if work is to be continued on the scale originally contemplated.

(4) The organization in Texas of branches of "Friends of Medical Progress" is urged. The Council has long since perfected plans for the organization of such lay bodies, under medical supervision and control, for the discussion of public health and medical matters. It was decided to defer action until the first objectives in the campaign had been attained, when it was planned to go ahead with the movement, either under the original plan or as a part of the Friends of Medical Progress movement.

(5) The suggestion is made that county and city health officers be encouraged to prepare public health articles for lay publications at regular intervals. The plans of the Council contemplate close coöperation with the State Board of Health through the proposed bureau of public education, in the editing of a health bulletin, the delivery of lectures to the lay public and the publication of official health articles in the press.

We trust we may be pardoned for this discussion. It has not been authorized by the Council on Legislation and Public Instruction, and the editor assumes full and personal responsibility therefor.

Collecting Dues.—While we do not envy county society secretaries their task of collecting dues under the existing conditions, we must insist that the job is not particularly onerous and that where there is persistence there will generally be success. We recognize that there are exceptions to this rule, but the only way to find that out is to make the effort. We feel that if our members realize that, after all, the fee is small in comparison with that usually charged by other organizations to which they belong and from which they expect as much advantage as they should expect from the State Medical Association, they will respond more promptly to appeals to pay up. It is ridiculous to consider the fee exacted for the important purposes before us as in any sense exorbitant. We will agree that there are, perhaps, those who are in such financial straits that even this sum would hurt, and that is to be regretted. We hope that our more prosperous members will make arrangements to help these worthy brethren to remain in line. We feel that few dissenters would be disagreeable about paying advanced dues if they could visualize the greater good to be accomplished with this additional money in hand. We are trying to estimate advantages to accrue in the light of those we have been receiving heretofore, forgetting that there has been an increase of 300 per cent in money and that quite probably there will be more than 300 per cent improvement in services rendered.

At any rate, and however all of that may be, the fact remains that the House of Delegates, acting in good faith, and in accordance with the by-laws of the State Association, has decided that our members should pay $15.00 for at least this year, and is is poor sportsmanship to refuse to pay it, except under extreme circumstances.

The dues are coming in rather satisfactorily. To date we have collected for 112 members. While this is not more than half of the number recorded at this time last year, it is encouraging, nevertheless. Anderson county has paid for 14 of its 17 members; Potter county has paid for 24 of its 41 members, and several other societies have made fairly large payments. The membership cards are being distributed, and we trust it will be a matter of pride to possess them. They are yellow, and represent a membership of pure gold.

What Does Christian Science Really Teach, and what is the attitude of christian science toward the medical profession? These are two questions that the Chairman of the Christian Science Committee on Publication for the State of Texas, recently undertook to answer, in a communication addressed to the JOURNAL and evidently intended for publication. It was in reply to an editorial recently appearing in the JOURNAL, and which appeared to bring reproach on the Christian Science Church in Texas, because of its attitude towards the practice of medicine and the medical profession. We are pleased to have received this letter, and particularly so since it appears to indicate a more reasonable attitude toward both the practice of medicine and its chief exponents, the recognized medical profession. If we may judge the christian scientists by this letter, and no doubt it was inspired by higher authority, there is a helpful and hopeful evolution in progress in this eminently respectable group, which chooses to call itself christian and at the same time scientific. Such an evolution is inevitable in organizations of this sort. Beginning with peculiar and sometimes foolish dogma, the progress to a more reasonable and sensible doctrine is in direct proportion to the induction into membership of clearer thinking people. It could hardly be, in this day of advanced scientific discoveries, that any organization, religious or otherwise, so at variance with the truths of science as the sect under discussion, could persist for any considerable length of time and continue to expand. The fit material for membership is too soon exhausted.

While we do not concede that there is justification in fact for the existence of christian science as a healing art, whether or not it sails under the banner of religion, we are pleased, indeed, to applaud the very evident desire on the part of the management to recognize some of their limitations and to teach caution in what they undertake. Indeed, much of the opposition of the medical profession to their teachings would not have existed, had more precaution been exercised in this particular. Within the personal knowledge of every doctor who has practiced medicine for even a brief time, are numerous incidents wherein christian science has appeared to have needlessly worked irreparable harm. At the same time, there have perhaps been numerous cases wherein christian science has apparently been beneficial. Could the one be eliminated, the other would appear to be worth while. For their own protection, christian science practitioners should avoid dealing with *sick people.* If they must deal with sick people, let them deal with those who have deliberately and after mature thought placed themselves in their care as communicants of their church, and not with persons who have thoughtlessly committed themselves to their care under the impression that they are dealing with a recognized system of healing. In other words, let them make their practice a religious procedure; they should not enter the field of the practice of medicine.

The letter follows:

To the Editor: The attention of the writer has been called to the editorial captioned "Counter-Offensive of the Christian Scientists," in your October issue; and the following is respectfully submitted as bearing on the principal points or issues involved. The main reasons for making this reply are to correct the quite general misconception as to what Christian Science really teaches regarding the human experience called "disease," and to state the true attitude of Christian Science towards the medical profession.

In the first place, it is not a fact that Christian Scientists hold that "there is no such thing as disease," as indicated in your editorial. Indeed, Christian Scientists quite well understand and appreciate that disease is very real and obdurate to the material, human sense of things; but as disease is held by them as error, and not as a part or factor of true being; and as every form of disease conditions are being healed through this understanding, the correctness of their position is demonstrated.

On page 460 of the Christian Science text-book, "Science and Health with Key to the Scriptures," by Mary Baker Eddy, we find the following with respect to Christian Science teaching regarding sickness and disease: "Sickness is neither imaginary nor unreal—that is, to the frightened, false sense of the patient. Sickness is more than fancy; it is solid conviction. It is therefore to be dealt with through right apprehension of the truth of being."

Christian Scientists view disease experiences in much the same light as the mathematician views errors in his computations. He does not hold these errors to be real, but as something to be eliminated by a correct application of mathematical truth. Similarly, the musician does not regard discords as a component part of the science of music; and they are eliminated by a correct understanding and application of the principle underlying harmony. Hence it is seen how, through Christian Science, discords of material sense (diseases) are eliminated from human experience; that is, by knowing the truth about disease, and by understanding and demonstrating that the realities of being are ever harmonious.

The mental origin and nature of disease is now freely admitted by many competent medical men;

no less an authority than Sir William Osler having held that the foundation of the treatment of disease is to be found in the realm of the mental; so the attitude of Christian Scientists should not be considered dangerous to the community; and their scrupulous observance of quarantine and contagion regulations is acknowledged by public health officials the country over.

The teachings of Christian Science with respect to the conscientious, skillful medical practitioner and surgeon (and their name is legion) may be seen from the following excerpts from pages 151 and 164 of Science and Health, wherein Mrs. Eddy states, "Great respect is due the motives and philanthropy of the higher class of physicians;" also, "It is just to say that generally the cultured class of medical practioners are grand men and women, therefore they are more scientific than are false claimants to Christian Science."

It is to be observed, then, that any wrong attitude on the part of the students of Christian Science towards the medical profession is a fault on their part, and not a fault of our teaching; and it should be understood that it is not "medicine" that is opposed, but opposition is made to the growth and development of what has come to be termed "state" or compulsory medicine. However, some of the most unrelenting opposition to the political activities of "organized medicine" comes from responsible and able journals and members of the regular medical profession itself, as will be seen from the following references.

In your leading editorial of the October issue, you mention the Illinois Medical Association. The official journal of that Association is one of the most aggressive and consistent foes of the spread of what they term "medical paternalism" that we know of.

At the 1922 convention of the American Medical Association, held in St. Louis, a resolution was adopted declaring "opposition to all forms of 'state medicine,' because of the ultimate harm that would come thereby to the public weal through such form of medical practice;" and Dr. Hubert Work stated that "promiscuous medical treatment is not a state function, and such treatment should not be tolerated by the public or by physicians."

From *The Journal of the American Medical Association* we glean such comments as: "Another error into which we have fallen as a profession is the tendency to regard the medical profession as a divinely authorized class, whose sacred and distinctive function is the protection of the people either with or without their consent. * * * Too often medical organizations * * * have taken the position that they were the courts of last resort; that it was their special function to dictate the terms of public health legislation, and that it was the duty of the people to accept their decisions and acquiesce in their judgment." Also, "The responsibility of protecting the public from disease and of securing better health conditions belongs to the people. It is not a function of the medical profession to maintain lobbies or to endeavor to secure public health measures by political methods."

The late Prof. William James, M. D., of Harvard, voluntarily appeared before the Massachusetts Legislature and opposed a measure introduced for the purpose of restricting medical practice in that state, saying that the state had no right to interfere in medical matters, nor "dare to take sides in medical controversies."

In the May 15, 1924, issue of the *Boston Medical and Surgical Journal*, we find the following: "State medicine will spell the doom of inspiration in medical work and of unlimited medical progress. In a land already burdened by the limitations set by a bureaucratic government, where one out of every forty has already been given the task of policing the other thirty-nine, let us at least be spared state medicine."

The next above quotation is a startling re-echo of a pronouncement of Dr. Benjamin Rush, famous Philadelphia medical teacher-practitioner, who wrote, in 1776, the following: "The Constitution of this Republic should make provision for medical freedom as well as for religious freedom. To restrict the art of healing to one class of men and deny equal privileges to others will constitute the Bastile of medical science. All such laws are un-American and despotic. They are fragments of monarchy, and have no place in a republic."

Christian Scientists have no quarrel with the medical profession, and entertain most cordial feelings towards them, and towards their endeavors to alleviate the manifold woes of mankind, and take no issue with their programs to raise the standards of their own practice; but they feel they have ample warrant, both in morals and in law, to ask that their practice be not interfered with by restrictive legislation; feeling that state medicine is no less repugnant to the higher human ideal than is state religion.

It should be recognized that whenever any group of citizens, no matter how well-intentioned and sincere, seek to gain recognition and control by political methods, they thereby become legitimate targets for those who disagree with such attempts to secure legislative preferment. The whole disagreement is political, which means that some common ground of agreement can be found in this State, as it has in many others.

RALPH W. STILL,
Christian Science Committee on Publication for Texas, El Paso, Texas.

So important have we considered this letter that we submitted it to Dr. W. B. Russ of San Antonio, for reply. We are pleased to submit his letter herewith:

To the Editor: Mr. Still says that "Christian Scientists well understand that disease is real to the material human sense of things," but hold that it is the result of error of mortal mind, and that it is healed through an understanding of this fact. He quotes Mary Baker Eddy as saying that "Sickness is neither imaginary nor unreal to the frightened false sense of the patient * * * It is, therefore, to be dealt with through right apprehension of the truth of being." He says that christian scientists view diseases as a mathematician views errors in his computations, and as a musician views discords in his music. All of this he offers as argument to refute the claim of the JOURNAL that christian scientists regard disease as an error of mortal mind.

Mr. Still's letter is so well written and so pleasing in tone that, at first reading, one is apt to feel like the old negro woman who admitted that while she did not understand what her preacher had to say, his sermons always did her a lot of good. A careful study of his argument, however, fails to show any conflict with the claim of the JOURNAL that christian scientists regard disease as the result of an error of mortal mind. Both definitely state that christian scientists regard disease as the result of error and believe that it can be cured by a proper understanding of the fact that the patient is sick only because he thinks he is sick, and will get well when he discovers his mistake.

Mr. Still's statement that christian scientists view disease in the same light the mathematician views errors in his computations, and that musicians view discords in music, is not apropos, because the mathematician knows that mistakes in computation are due

to the fact that there is some real trouble with his figures, with which his mental attitude has nothing to do; and the musician knows that discord is quite often the result of some very real trouble in the structure of his musical score, or in his instrument, and that no mental attitude alone will correct the trouble.

Mr. Still's observation that sickness is to the false sense of the patient a solid conviction and therefore to be dealt with through right apprehension of the "truth of being" surpasses my understanding. I would like to know what he means by the "truth of being."

Sir William Osler is quoted as holding that the foundation of the treatment of disease is to be found in the realm of the mental; and many competent medical men are said to freely admit the mental origin and nature of disease. For this reason Mr. Still thinks the attitude of christian scientists in holding that the cause of disease is a mistake on the part of those who fail to understand the "truth of being," should free them of the odium of being considered dangerous to the community. I am sure that Mr. Still is incorrect in the assumption that Sir William Osler and many other competent medical men have regarded the spread of small-pox, typhoid fever, diphtheria, foot-and-mouth disease, tick fever, gonorrhea, syphilis and gastro-intestinal diseases resulting from the drinking of contaminated milk, and the eating of decomposed food-stuffs, and the diseases arising from bad ventilation, overwork, unfavorable climatic conditions, eye-strain, chemical poisons, and are not sectarian and are not the property of any mental in origin, or in any way related to one's attitude of mind. I am sure that he does not labor under the delusion that any competent medical men, or other scientists, hold that the diseases caused by these factors can be cured by a change of mental attitude, or by any understanding whatsoever as to the "truth of being." In charging that Sir William Osler and other distinguished medical men regard the diseases transmitted by mosquitoes and flies, and caused by bad food, bad air, bad working conditions and bad climate, are either caused by or can be cured by the mental attitude of the victims, it seems to me that Mr. Still is suffering from mental error of a graver nature than the state of mental infirmity which caused the mathematician to make a mistake in his calculation, or the musician to strike a false note in his music. It seems to me that in making this statement he has gotten away from the realm of opinion and projected himself into a head-on collision with fact.

Mr. Still quotes Mrs. Eddy as saying that many medical practitioners are cultured men and women and better qualified to pose as scientists than are some of the more poorly endowed devotees of christian science. This is a polite way of saying that some of the better class of well trained medical practitioners are really more honest and intelligent and dependable than are the poorer class of christian scientists. Well, even that helps.

Mr. Still now comes to what seems to be the real reason for his letter, namely, that christian scientists object to "state medicine" and are opposed to any class of men, however good and honest and powerful, who seek to dictate the policy of the government with reference to the treatment and the prevention of disease. He quotes the American Medical Association, the *Illinois Medical Journal, The Boston Medical and Surgical Journal,* and certain distinguished men like Professor William James of Harvard, and Dr. Benjamin Rush, as opposing paternalism on the part of the government in the matter of the practice of medicine, curative and preventive. If Mr. Still and the Christian Science Committee on Publication really believe that the medical profession is in favor of State Medicine, or of putting in the hands of the doctors of Texas, or any other class of citizens, the right to dictate in matters pertaining to the treatment of disease, his complaint is just and is worthy of consideration. The trouble is that he is wrong in his facts.

The Texas Medical Practice Act, which became a law in 1907, is designed to avoid this contingency, and the fact that the medical profession has loyally supported that act is proof that they have no desire to dictate to the people of Texas how disease shall be treated, or to control by law the teaching and practice with regard to the management of the sick and injured. Under the Medical Practice Act, any man may engage in the treatment of the sick, by any method that may seem good to him, and he may entertain any sort of idea, however wild and impractical, as to the origin and spread of disease. The only requirement is that he show to the State that he has a trained mind, as evidenced by a high school or college education, and that he is familiar with the known facts of science about which there is no controversy and can be no controversy. These facts are not sectarian and are not the property of any one group; they are as unsectarian as are the facts of geography and mathematics. These have frequently been given to the world by laymen, and not always by physicians. The facts concerning the structure of the human body and its functions in health and in disease, as taught by anatomy, pathology, physiology, chemistry, and the rest, are not the property of the medical profession; they belong to all the world. They were discovered and have always been taught by laymen as well as by physicians. For example, there can be no question as to the number of bones in a man's skeleton, or as to the chemical composition of his blood, or as to the life history and habits of bacteria. Surely, there can be no controversy as to the facts concerning sanitation, or as to the penalties imposed by violation of the natural laws governing the lives of living things as taught in biology.

The State Medical Association does *not* favor state medicine, and has *never* endorsed any law that would tend to restrict the art of healing to any class. It is a duty and a function of the State to provide for the protection and health of the people, and all laws created for the purpose of securing pure food supply, good sanitary conditions, the prevention and spread of epidemics, and to limit the occurrence of preventable diseases, are the concern of all the people.

If in the judgment of the Legislature, the bar associations, the ministerial associations, the medical associations, the T. P. A., or any other organization, are in possession of information that will assist in the framing of wise laws, it certainly becomes the duty of these organizations to place such information before it. This does not mean that public health laws are designed to serve the purposes of any class of citizens; but it does guarantee that foolish and ineffective laws will be criticized, and possibly so modified as to serve the interests of all the people for whom they are designed.

I presume that Mr. Still infers that the doctors are seeking to secure a monopoly in the practice of medicine, to the end, that they may require persons engaged in the business or profession of caring for the sick to submit their method of treatment to the approval of the so-called "Medical Trust." A careful reading of the Medical Practice Act will certainly quiet all of his fears on this point. Under that law no man can be interfered with or limited in any way in the treatment of the sick by any means he may elect, whether it be by prayer, pills, or the laying on of hands, and every citizen of Texas has a perfect right to employ the practitioner of his choice. The

limitations imposed, apply against so-called regular doctors just as much as they do against the followers of the cults or cure-all systems, however foolish and impossible their claims may be. The discrimination in the law is against ignorance of the known facts of science, which are the property of the whole world and not of the medical profession alone. The law does not permit discrimination against any method of treatment and does not favor any plan of treatment whatsoever.

I am glad to note that Mr. Still does not permit himself to sink to the low level of the ignorant and misguided men and women who charge that the medical profession is seeking to scare people into being sick by suggesting to legislatures the advisability of draining swamps, killing mosquitoes, making proper sewerage connections, attending to ventilation in schools, public buildings and railroad trains, enforcing sanitation in hotels and boarding houses, and providing penalties for the selling of impure foods, including contaminated milk. I am also glad that he does not charge the medical profession with any improper motive in suggesting the means for preventing the spread of typhoid fever, diphtheria, small-pox and other preventable diseases.

I believe that the Christian Science Committee on Publication and the medical profession are agreed upon the following essential points:

(1) That the christian scientists regard disease as the result of mental error, and believe that disease can be prevented by proper understanding of the fact that they are mental in origin, and can be cured by correcting the false mental impressions to which they are due. This is certainly not a matter to quarrel about, and the christian scientist as an honest citizen has a right to his own opinion.

(2) That neither Sir William Osler, nor any other competent medical man, has ever held exactly this opinion with regard to the origin, prevention and treatment of disease.

(3) That paternalism in medicine, or "State Medicine," by which is meant the dictation and control by one class of citizens of the management and treatment of the sick, is wrong and should be frowned upon as a mistaken policy.

(4) That christian scientists who wish, as a part of their religious belief, to heal the sick by prayer should be permitted to do so without interference by anybody, provided they do not seek to make a breach in the law, through which charlatans and medical pretenders can escape at least the educational requirements and the known facts of science as a prerequisite to assuming the responsibility of caring for the sick as an occupation.

(5) That christian scientists, and all other citizens, must admit the need for the employment of all the facts of science in the prevention of disease and in the control of epidemics.

The medical profession realizes that many of our finest men and women adhere to the christian science faith as a matter of religion, and that they are entitled to the same respect that is accorded the devotees of every other religious faith. It is a fact much to be regretted, however, that every ignorant charlatan and faker who seeks to enjoy the privileges of exploiting the ignorant public with new fangled, commercial, cure-all schemes for the treatment of the sick, and who wishes to avoid meeting any sort of educational requirements, feels that he can rely upon the support of the great Christian Science Church in his efforts to defeat the laws which were enacted to prevent the ignorant and vicious quacks from pursuing the practice of medicine without restriction. The rag-tag and bobtail among faith healers, charlatans and get-rich-quick fakers in the practice of medicine, should be made to understand that a great church, devoted to high ideals and to culture, has nothing in common with law-breakers and quacks who have no other means of earning a livelihood than exploiting the ignorant and robbing the thin purses of the poor.

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Federal Taxes Have Not Been Reduced, at least so far as the contentions of the medical profession for special consideration are concerned. Some time ago, we discussed this matter at length, closing with the suggestion that county societies adopt resolutions insisting that the tax on physicions for the privilege of relieving suffering under the Harrison Narcotic Act, especially, be reduced. Numerous letters from influential physicians in the State, making this plea, have been written, we happen to know, but whether county societies have done anything of the sort, or whether the practice was generally followed individually, we do not know. At any rate, the House of Representatives has passed the Revenue Act for 1924 on to the Senate, continuing the excess war tax under the Harrison Narcotic Act.

Our plea has been, also for the deduction of traveling expenses incident to attending medical meetings and post-graduate study, in computing the income taxes of the physician. This plea has also been denied by the House of Representatives. The bill is now before the Senate, and it is not too late to help get action.

In writing, special emphasis should be laid on the facts (1) that the Harrison Narcotic Act is a police measure, enacted for the common good; (2) that the taxes imposed by it were levied when the act was passed, solely to give it constitutionality; (3) that the persons taxed under the law derive no special benefit from it but on the contrary are put to great trouble in the keeping of records and making reports; and (4) that there is neither logic nor justice in imposing on the taxpayers under that act the entire cost of policing the whole country against the narcotic evil. These facts should be particularly stressed, because the Treasury Department, in seeking an increase of a half million dollars in the appropriation for the enforcement of the act, has insinuated into its argument the hypothesis that there is a logical relation between the revenues derived from this act and the cost of enforcing it, apparently ignoring the fact that whatever the act may be in legal fiction, it is merely a police measure masquerading under the guise of a revenue law.

GET A GOLD CARD

ORIGINAL ARTICLES

WHAT TEXAS HAS NOT DONE FOR HER INSANE.*

BY

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Texas has provided asylum room for about 6,500 of her insane. This is crowded with about 7,500 cases and is insufficient at the present time by at least 2,000 cases. At no time in the last decade has there been sufficient room for all the insane. Her jails have contained from one to several hundred at all times except for a few days following the opening up of a small addition to the already existing facilities, and in a few weeks the same condition prevailed. Poorhouses and county farms and many homes are laboriously and inadequately caring for hundreds of the insane because of the long delay in admitting them to the asylums, and rather than confine them in jail awaiting admission.

Asylum superintendents have been prevailed on, begged, pleaded with, threatened and coerced by every known means, by private citizens, lawyers, doctors, judges, preachers, legislators, in fact by any and all who wielded some influence, political or otherwise, including governors, to admit this patient or that, which condition has caused an overcrowding of the asylums for more than the past 20 years, forcing them to take more patients than they really have room for.

There is one doctor for about every 400 patients. And these are not well people, but sick people deprived of their liberty with no choice as to their care. The law requires that the physician see each patient twice a day. Just figure this a moment. Suppose one minute were spent with each patient twice a day, this would make 800 minutes or over 13 hours. And this same physician must also talk to the relatives and friends of these 400 patients. He must answer the letters inquiring about them and do many other things which require at least a little time. What is the result? He must hurry through the wards, making few if any examinations and taking the word of the attendant or supervisor as to the health and well being of his 400 sick patients. Other duties are pressing. Consequently, an hour, or possibly two hours are spent at each round in seeing 400 patients and saying, "Good morning or good evening, ladies or gentlemen," to the various groups assembled on the benches throughout the wards. How much time can he give to careful records and physical as well as neurological and psychiatric examinations? How thoroughly acquainted can he become with these mentally sick who are some one's loved ones and who possess neither the freedom nor the mind to choose their own medical attention? How much time has he to listen to and help them with their mental problems calling for careful analysis and adjustment? And they do have mental problems, that is largely what is the matter with them.

Let us follow an individual to the asylum and see what path he travels. After some days, weeks, or months of peculiar behavior, it begins to dawn in the minds of the patient's family that something is wrong and the family physician is consulted. If the patient is not so violent as to require the constant attention of several to restrain him, the doctor gives him calomel and a tonic and hopes for a speedy recovery. Bromides and morphine play a large part in the therapeutics of the average doctor in such cases. All too often he does not know how to make a diagnosis or determine a prognosis. How can he? It is not in his line. Too often the patient does not get a thorough clinical and laboratory examination at all. After days or weeks, and in some cases even months, of what is most frequently, to say the least of it, an unscientific care of the case, it is decided that it is best to send the patient to the asylum. Accordingly the county judge is appealed to and the patient, who is sick, mind you, is duly arrested and hailed into court where he is tried before a jury of his peers (and not infrequently they are his peers, that is, his equals), who know just as much about mental diseases as he does. Here he is compelled to sit and listen to testimony given to prove that he is of unsound mind and that it is necessary for the welfare of himself and others that he be placed under restraint. Many patients can appreciate what this means and it is an agonizing time for them. To his relatives it is, to put it but mildly, a very embarrassing ordeal. Suppose the patient is a refined, delicate woman—your mother, wife, sister or daughter! Just picture to yourself the infamous shame of it, this way we have of placing our mentally sick in a hospital. All this inhuman trial with its agonies and embarrassments is done to give the hospital permission to take the patient and restrain him of his liberty. And he cannot get treatment in this hospital without his liberty is taken from him for, of course, it must be taken away from him or he would not accept treatment because he can no longer reason soundly as to what is best for him. Then what happens next to our sick relative? And I make no apology for calling him sick; he is sick just the same as any one

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with malfunction of any organ other than the brain.

The judge then orders him confined in jail until his request for admission to the hospital, or asylum, can be made known to the superintendent and his answer received, which is usually that the institution is full and that he must await the time with patience until some one dies, or maybe gets well, and his turn comes. In some cases the judge permits the relatives to give bond and care for the patient at home, if he is assured that this can be safely done. Otherwise, this sick relative of some one is placed in jail where criminals are confined and where usually conditions are poor from every sanitary and hygienic standpoint, for the criminal—let alone the mentally sick! There is almost no medical care and attention, no special diet, no one to keep the patient covered on cold nights, no medicine where required, only brutal treatment, scoldings, harsh language, abuse, kicks, cuffs and even beatings, in hundreds of instances. What would you expect to happen to the sick mind under these conditions? Well—*it usually happens*, and when the hospital is finally reached after days or usually weeks or months of this, the chance for our sick relative to recover has almost disappeared. If the patient had faith in his own relatives or hope of help from his friends, it would indeed be a strong mind that could weather such a storm without complete wrecking. What would become of his faith and hope when to all his appeals the above answers were given?

Then what? At last he is admitted to the hospital or asylum. I don't like the word asylum, and neither does the patient or his relatives. And his relatives, and sometimes even the patient himself, hope that now he will get the long delayed treatment and be speedily restored to normal. But they forget that by this time his chance has already well nigh been lost and that he now becomes a member of a herd and that individual care and medical treatment in the asylum is at a minimum. Does he get medicine? Possibly for a while, but not for long, for this large herd is considered hopelessly insane and the doctor, whose task ahead is so big that he becomes discouraged and loses zeal, finally ceases what little individual effort he began.

Does any one spend hours, day after day, with him to try to understand why his mental mechanism went wrong; what his problems are, and attempt an adjustment? By no means. The doctor hasn't time, if he knew how. The average asylum physician in Texas has received no special training, except what he has picked up in the institution after getting the job. The salary is not large enough to demand specially trained men. What's the use? They simply look after the hopeless insane who don't get well anyhow. And most of the doctors soon take this view. I wish to stress the point that most asylum physicians believe the insane cannot recover and therefore any scientific effort on their part is useless. The physician is not going to do more than his routine duties and no more of them than he has to for long, because usually there is no one to encourage him and no stimulus, other than his own ambition which doesn't last long. His superintendent, under whom he serves, has too many duties demanding his attention for him to give much attention to the scientific work done by his assistants. He must employ and discharge all labor and look after a thousand and one non-medical things. How can he do all this and still have left energy sufficient to map out and guide scientific work? He that can and does is indeed a mental giant!

Inasmuch as our sick relative is mentally ill he does not always give voice to his troubles and that they may be found and corrected routine examinations must be made. Many an insane patient has become violent because of an unvoiced toothache, headache, or other complaint. It has been my own humiliating experience to spend days trying to quiet a patient only to learn accidentally that an abscessed tooth was to blame for it all. Once it was a perforated bowel, and once a brain abscess found on autopsy and never suspected during life. Why? Simply because not a one of us at that time in that asylum knew anything about brain abscess, especially in the insane.

Our sick relative should have the attention of an expert eye, ear, nose and throat man when he needs one, or a dentist, or, not infrequently, of a surgeon; but such is not often the case, in fact it is almost never the case.

Every pathological focus in his body should receive attention, from ingrowing toenails to ingrowing lashes, because from them flow to the brain abnormal stimuli adding to or composing the burdened mind. He should have any kind of laboratory work done that is necessary to thoroughly work out his pathology. If there is physical pathology, how can it be treated unless it is known? Suppose he needs some operative work. Does he have the advantage of a surgeon, skilled in diagnosis as well as in operative technique? Suppose he is suspected of having syphilis. Can the various forms of syphilis of the nervous system be correctly diagnosed without a spinal fluid analysis? Of course not. Nor can his treatment be

properly carried out unless the laboratory is frequently consulted. Too often, there is a tendency in our asylums to get all the work possible out of the patient. There are not many attendants, probably one to each 20 patients (only one to each building in the Epileptic Colony) and some one must help. If the patient is confined to bed there is more work and less help and yet I am of the opinion that practically all acute cases should be confined to bed for a while, at least. This facilitates frequent examinations, gives the patient needed rest, and it is well known that most human ills require complete rest for the quickest and best results. And this is particularly true of mental troubles.

There are three Texas asylums, each containing about 2,000 patients. One of them has 3 physicians besides the superintendent, one has four and one five which is an average of 500 patients to the physician. They all three have dentists. But these institutions frequently have difficulty in getting physicians, because of inadequate salaries and lack of promotion.

St. Elizabeth's Hospital in Washington, D. C., had an average daily population of 3,982 patients in 1923. Besides the superintendent, this institution has one first assistant physician, 2 clinical directors, 1 director of laboratories, 1 bacteriologist, 1 clinical psychiatrist and 3 assistants, 1 internist and 3 associates, 9 senior assistant physicians, 7 assistant physicians, 6 junior assistant physicians, 5 medical internes, 1 visiting dentist and 2 resident dentists, and 1 visiting ophthalmologist, making a total of 44 (all physicians except two of the dentists), an average of one to every 90 patients. Besides these there is a consulting staff composed of 4 internists, 6 general surgeons, 1 alienist, 4 gynecologists, 4 genito-urinary men, 2 ophthalmologists, 4 laryngologists, 2 medical zoologists and 2 dermatologists, a total of 29. In this institution, in 1923, 1,298 patients received 9,667 hydrotherapeutic treatments, special rooms being provided for this purpose. Each of our Texas asylums should have more physicians, and the specialties should be represented for the better care and treatment of the patients. The doctors should be men of special training and the salaries should be large enough to attract better trained men.

Adequate room should be provided so that never again will an insane patient have to be placed in jail, except possibly in emergencies when violent patients must be confined somewhere until train time. The burden of caring for the insane has always been on the State, except those who are confined in jail. It seems to me that the large communities could well afford, and that it would be entirely practical, to have small psychopathic institutions to care for their acute cases until they recover or can be admitted to the asylums. Many would recover and never get to the asylum; and many of them *do recover*, don't forget that. Certainly, many more would recover if better and more scientific facilities were provided for their care and treatment.

There should be isolation buildings for the tubercular and other contagious diseases. In some of our institutions, the tubercular patients live in the same ward with the other patients. More adequate facilities should be provided for recreation. The majority of the patients spend practically the entire day sitting on benches in the wards, with an outing of from 1 to 2 hours when the weather permits. The arts and crafts certainly should be taught in all of these institutions. When not confined to bed, the patient's waking time should not be devoted to idleness but to supervised and well-directed work and play, which will be of therapeutic value in aiding him toward recovery. Texas has done almost nothing in the way of prophylactic treatment to prevent patients becoming insane, and much can be done and is being done in other states—but this is another long story.

Scientific medical and nursing attention will transform our asylums into hospitals. There should be a training school for nurses, male and female, in each asylum. To this should be added complete laboratories, including x-ray equipment, with a full time and well-trained laboratory physician in charge, doing complete laboratory work and keeping records in each case. There should be regular clinical staff meetings and research work should be encouraged.

The State has come to recognize that it is its duty to educate its youth; by establishing state institutions for her insane, *she has acknowledged her duty to care for the indigent insane*—but how inadequately this has been done, I have attempted to show you.

The medical profession has been indifferent to this question of scientific care of our mentally sick and unfortunately that part of the profession more directly concerned seems to have assumed the attitude that the insane are not sick people who need intensive treatment and study, but simply hopelessly crazy people for whom custodial care is all that is required, and that as cheaply as possible.

The total average number of patients in the 5 insane asylums and the Epileptic Colony, in 1923, was 7,196, costing the State a total of $1,522,844.79 or an average of $211.62 for the year, which is an average of 59c each per

day. And this was for every expense, including medical attention. It was 91c in 1922, so you can see every effort is being made to make it as cheap as possible, and it has been left to the superintendent, alone, to make the service better. But he must do it cheaper as time goes by, and he gains experience in economy. Do you know that the superintendents of our state asylums have to actually beg the legislature for the bare necessities?

Let us make some comparisons with our other eleemosynary institutions. Each tubercular patient, in Carlsbad, cost the State $562.25 for 1923, or more than 2½ times as much as each insane patient cost. Each girl in the training school at Gainesville cost the State $789.49 for the same year, or more than 3½ times as much as the insane. Each soldier in the American Legion Memorial Sanitarium for the same year cost the State $1,041.08, or nearly 5 times as much as the insane. The per capita cost of the insane, in 1923, was less than the per capita cost in any other eleemosynary institution.

Let's compare the ratio of employees to patients in these institutions, in 1923. For the Legion Sanitarium it was one for every 1.64 patients; for the Girls' Training School, one employee to every 2.78; for the tubercular sanitarium, one for every 2.61 patients; while for the asylum it was one employee for every 7.23 patients, showing less care for the mentally ill than for the physically ill.

The United States Government estimate of Texas' wealth at the end of 1922 is $9,850,896,000. If this wealth were taxed at the rate of 10c for every hundred dollars it would yield $9,850,896, while the actual amount spent for the care and treatment of the insane was only one and one-half millions.

If it is the State's duty to care for the insane within her borders, should it not be done as well as medical science can plan?

We have no psychopathic hospital where acute cases can be taken first, or where patients may voluntarily enter for intensive study, treatment and classification. Such institutions in other states have been able to return to their homes about 60 per cent of the cases who have recovered and thereby escaped asylum life. To this hospital could be sent all persons accused of crime, where the question of sanity is involved. Here they could receive intensive study and analysis by trained men whose opinion could be accepted as final before the court, and thousands upon thousands of dollars saved in unnecessary trials. This works in Massachusetts, why not in Texas?

Texas has provided no institution for the criminal insane who should certainly not be confined with non-criminal types. Their problems are different—their pathology often different—and it is not fair to the courts or to the public that they should be turned out after a few months of good behavior, as is so often done. Public opinion, as well as our courts, is opposed to the plea of insanity because the criminal insane are often allowed to leave a short time after being sent to the asylum. Thus society's demand for revenge is not satisfied and the public welfare is not safeguarded.

Every hospital in this country has been benefited by the standardization required by the American College of Surgeons. This standardization should include our asylums and they should not be allowed to remain *merely brick walls for custodial care.*

No research work is being done in Texas asylums, although the material is abundant and the need urgent. No metabolism studies are being made. The treatment of neurosyphilis is sadly neglected, though this disease comprises at least 18 per cent of the insane. There were probably not over 20 autopsies done in all the institutions in 1923.

The method of admitting patients to our asylums must certainly be changed. Would not justice obtain and private interest and liberty be safeguarded just as well if two reputable physicians certified to the district judge the need of restraint? If, perchance, mistakes should occur or injustice be done and liberty wrongly denied, would it not be immediately discovered when the individual reached the institution?

It is the opinion of the writer that this State should have a real Board of Health adequately compensated and composed of experts and that all our eleemosynary institutions of a medical nature should be directly under this Board of Health. Each institution should be standardized and fully equipped for scientific study, treatment and research work. Its physicians should be trained men and the salaries should be adequate to attract them. We all know and admit that these things should be. The asylum superintendents have worn themselves to hopelessness trying to get needed changes. Our newspapers have editorialized the legislatures. Our county judges have tackled the problem and still there are no changes.

How then can these things be? Governor Neff has well said that the State Medical Association can get anything it wants bad enough to work for, and it is my opinion that all these needed changes can absolutely be brought about if this State Medical Association will set itself to bring them about. After all, who else can or will, or who else knows what is needed? Is it not a medical

matter, and are we not the leaders in medical matters in this State? Are not the insane sick people and cannot many of them recover? Should we, then, not view cases of insanity as problems in pathology, calling forth our best curative efforts, just as in tuberculosis, cancer and other diseases which once presented more hopeless problems in medicine?

THE PROPER CARE AND TREATMENT OF THE INSANE.*

BY

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"Insanity is a manifestation in language or conduct of disease or defect of the brain." This definition of insanity by Dr. Frederick Peterson of New York fulfills the modern idea of this condition.

The view expressed that the brain is the organ of psychic activities and that *mental* disease has the same significance as *cerebral* disease is the result of a progressive growth of knowledge which must be accounted one of the great achievements of the human mind. In telling us of this grand achievement, the history of psychiatry discloses the difficulties which stood in the way of progress in this branch of medicine, recording the long and hard, though victorious, struggle which science and humanity fought with error, cruelty and superstition. Every one has read much of how the insane, in the early ages, were victims of torture and of many forms of inhumanity; of how they were left to languish in prisons, penned up with the commonest criminals and loaded with chains, the victims of ignorance and abandoned to the cruelty of a jailer who had no ear for the cry of the suffering and diseased individual. In this story are revealed the ancient prejudices which saw in the unfortunate insane only those who had lost the attributes of humanity, and had become animals, and who were mentally dead and abandoned by God, and which regarded these unfortunate beings as persons possessed by evil powers—as outcasts and criminals.

The history of insanity in ancient times is limited to occasional references in the Bible and in works of poetry. As there was no correct appreciation of such abnormal mental conditions; no treatment other than that limited to religious ceremonies and charms can be expected. Such affected individuals were either honored as holy or given over to the influences of religion, which, unfortunately, did not always suggest humane consideration.

Psychiatry remained in this condition until about 500 B. C. when Hippocrates gave it some scientific consideration by taking the treatment of such cases out of the hands of the priests. Hippocrates said, "The brain is the seat of mental activity and, like other organs, is obnoxious to the natural causes of disease. Mental diseases arise from abnormalities of the brain." His treatment was both medical and dietetic, making use of bloodletting, emetics and rest. He was the first to recognize that the brain is the organ at fault in these conditions, and that insane states are physical disturbances like other diseases and not the result of supernatural influences. Then, in turn, other men as Aretaeus, Galen and C. Aurelianus worked along the same theory, the latter outlining a clearer and more precise plan of treatment which cast aside almost entirely restraint and force as means of treatment.

With the decline of the ancient Roman Empire, medical science deteriorated, and naturally this retrogression was most marked in that branch of medicine least understood—psychiatry. Instead of scientific investigation, there again arose magic, mysticism and superstition in reference to this dreadful affliction. Thus the treatment of the insane, as in earlier centuries, fell to the priests who, in their blind fanaticism, contended against the dangerous witches and devils with the stake and torture, or sought to drive out the evil spirits by violent exorcism. Maniacal persons were cast into dark prisons, chained like wild beasts and left to die in filth and misery. The witch-trials of this age, which were innumerable and continued to occur as late as the eighteenth century, must be the prototypes of the present day trials of the mentally diseased in the courts of our fair State before juries of laymen often too ignorant to do more than follow the instruction: "Sign here!"

The age of the Reformation brought a better time also for medicine, but the struggle with superstition and mysticism was so great that for a long time it was disputed whether the insane were possessed by evil spirits, and therefore to be left to the priests, or whether they were patients to be treated by physicians. The most enlightened among the physicians were still in doubt as to the nature of insanity; so that, just as in the earlier times attempts were made to drive out the devil, physicians now sought to drive out delusions; and, ignorant of the origin and nature of these delusions they made use of the most ridiculous measures. For example, an emetic was given to a woman who be-

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lieved she had a snake in her stomach and a lizard placed in the vomit for her to see. In 1573, an act of the English Parliament allowed peasants to hunt those who were called werewolfs, because in their delusions they thought themselves wild animals and ran about the forest. The Indians and other races put to death their insane when they became a burden and nonproducers. Such was the condition of psychiatry up to a comparatively short time ago.

Even in the middle of the eighteenth century, the lot of the insane was a sad one, for, although many physicians recognized the fact that insanity was the expression of abnormal disturbances of cerebral and nervous activity, they still did not understand that these diseases, like many others, when recognized early and treated properly, are curable. As long as this truth was not grasped, society looked upon the insane as lost members and considered that the only treatment necessary was to put them behind bars and in the hands of jailers, as persons dangerous to the community. This was the plan of caring for the insane all during the time of the often described crazy-house. The Turks, even before the time of Christ, had such an institution for the reception of the insane. In 1818, a report was made to the ministry of France that her insane were worse cared for than criminals and animals.

England was the first country in which the cure of the insane as a whole was attempted. In the middle of the eighteenth century, St. Luke's Hospital was founded in London, and although the equipment in this hospital was primitive, the success of its treatments led others to build similar institutions for the advancement of scientific knowledge in psychiatry. It was Pinel, in 1792, who as physician struck the chains from the patients in the asylum and taught that they should be treated as human beings, thus giving an impulse toward reform in the care and treatment of the insane, that extended to all civilized lands. But it remained for the nineteenth century to mark the mighty advance of psychiatry and its close union with other branches of medicine. This developing humanitarian sentiment built institutions everywhere for the observation and care of the insane.

Have we, as custodians of the public health in this twentieth century, retarded or favored the march of progress along this line; and are we in the grand State of Texas making full use of present day knowledge in the handling of this malady? Other papers in this symposium have answered, to our shame, very largely in the negative. There are men yet living who can tell you of seeing such patients chained in their padded cells, with only a peep hole through which water and food was thrown to the patient and through which barely enough of pure air could enter to sustain life. Even in this year, 1924, an individual from a neighboring county told me, with a sparkle of pride in her expression, that her county had recently provided a "padded cell" in the jail, in which to place the insane.

If Hippocrates and others who started the reform in psychiatry during the dark ages could visit our country and view the treatment accorded thousands of our mentally diseased, would they not hang their heads in shame and ask if they had not been awakened in their own or some previous age? I think every one is fully convinced that we have fallen short of our duty in the proper care and treatment of these mentally sick people, most unfortunate because they are often not able or refuse to give any expression of their needs and desires. They are thus left entirely to the mercy of their keepers, who in their ministrations can be kind and soothing, or cruel and antagonistic, which retards improvement and may be the determining factor between recovery and chronic mental invalidism.

The appeal of the insane for their personal liberty is, doubtless, largely responsible for our crude laws governing their care and hence our slow progress in this branch of medicine. Who thinks of consulting a lawyer, the sheriff and the jailer if his father has pneumonia, his wife appendicitis, or his daughter tonsillitis? What well-balanced individual will say, "Let the child suffocating from diphtheria die because he crys and resists intubation or the giving of antitoxin for relief?" Who will sit idly by and permit the typhoid-fever patient, restless in delirium, to jump from his window to self-destruction? Then why permit the mentally diseased, who are no more responsible than the child or the delirious patient, to control their destinies when they most need the services of a competent and specially qualified physician?

The great need of Texas, today, is a psychopathic hospital or hospitals where the acutely insane can and must be admitted at once either by voluntary commitment or upon the certificate of a physician or board of physicians. Every individual concerned in the making of our laws should experience one time the feeling of embarrassment and humiliation which the superintendent of one of the various state hospitals for the insane must frequently endure when he tells the man who (ignorant of the law but prompted by his love and filial duty) takes

his mother to the nearest asylum immediately she is taken sick with a mental disease, that she cannot be admitted because the law has not been complied with. In Texas, the only advise to such an individual requiring state aid is to take his mother to the jail and in jail she must remain until the day of the trial (witch-trial, if you please) when a jury of laymen will decide whether or not his mother should be permitted to have treatment for her diseased condition, and then she may remain in this jail, with all of its horrors, for days, weeks, months or even years before being admitted to an asylum.

Such a hospital should be well equipped for the diagnosis and treatment of any and all physical diseases, for, even though insanity is the result of a disease or defect of the brain, the individual so afflicted may have other diseased conditions needing attention in order to provide a good stimulating basis for treatment of the mental condition.

It was Jacobi, in the early part of the nineteenth century, who overshot the mark somewhat when he placed the seat of mental disease in organs outside the skull, and regarded mental disturbances only as a symptom which might accompany any disease of the vegetative organs, thus giving a very subordinate value to the brain affection which, according to his view, was secondary. Today, there are those going to the same extreme by saying that all insanity is caused by some focal infection and can be relieved by removal of this focus alone. The statistics of results obtained by Dr. Cotton of the Trenton State Hospital for the Insane, in New Jersey, are not corroborated by reports of men equally qualified for work along this same line. Regardless of your opinion as to the exact role focal infection plays in its influence on mental diseases, it is important to remove any acute pathology and treat any other physical ailment in the mentally diseased; but we cannot hope to relieve every mental aberration merely by the removal of the focal infection outside the brain.

Just as in tuberculosis and pellagra, the physical health must be carefully guarded to get the quickest and best results in mental diseases. Hence the value of this psychopathic hospital, where all the insane should be taken at once. This hospital should have a sufficient number of specially qualified physicians and nurses trained in psychiatry, to give each patient the time necessary to thoroughly analyze his case and to assist him in untangling his badly knotted mental skein. In addition to this staff of psychiatrists, it would be advisable to have a number of internes from various medical colleges, who could obtain training in psychiatry and be of much service to the medical staff of the hospital. This plan would in time help supply the much-needed, well trained alienists for the more responsible positions in the various hospitals and on psychiatric boards.

Contrary to the early opinion that all insanity was incurable, many recover from their mental illness and return to a normal, useful life. If treatment is not to be had as soon as the patient is taken ill, his chances for recovery are lessened as long as he remains untreated; the great majority of them cannot be properly treated in a general hospital for the same reason that you would not send your patient needing a laparotomy to a tuberculosis sanatorium, namely, lack of equipment for this particular case. When, in the opinion of the staff of physicians of this hospital or of a proper board designated for this purpose, any patient is determined incurable, he or she should then be transferred to a hospital where proper custodial care could be had at less expense.

There should also be a separate institution for the care of the insane showing criminal tendencies, where they could be committed and required to remain until this same board of psychiatrists, uninfluenced by politics or the hope of reward, should decide on some other disposition of their cases. In this connection, I would advise that there be a psychiatrist on the staff of physicians of every penal institution, who should keep in close touch with every inmate so that when any case of mental disease is discovered, that individual could be transferred to this hospital for the criminal insane, or given whatever treatment his malady deserves.

The insane epileptics of our State are in great need of some attention. The excellent law establishing the Epileptic Colony does not provide for those epileptics manifesting a psychosis which renders them incompetent. As the asylums are not permitted to admit epileptics, this most unfortunate class must of necessity go to jail.

There is still another class of diseased individuals whose successful treatment depends upon their confinement in an institution for a varying period of time—the drug habitue and the inebriate. These are truly diseased individuals, the disease is one of the nervous system, and the patients need the services of a doctor trained in the treatment of such diseases. There should be a law committing such a patient to an institution under similar management as a well regulated hospital for the insane, where he should be detained until the physician in charge can say that he is restored or has obtained the maximum benefit from the treatment. The first commitment for this class of patients

should be for at least three months. If the patient returns to the use of drugs or alcoholics, the second commitment should be for six months, and any future ones for one year.

All of these institutions should consider the value of occupational therapy and provide proper equipment and instructors for the arts and crafts department. This has proven to be a great adjunct in the treatment of the insane, many cures being ascribed to its use.

Every sick person should be put to bed for treatment, and should remain in bed, during the course of any acute disease. The same indication must be met in the mentally diseased. After the acute symptoms have subsided and during convalescence, how the patient can best occupy his or her time is often a great problem. Suitable work, adapted to the patient's desires and ability, best meets this requirement and at the same time re-establishes the individual's confidence in his ability to again take up life in a normal way. It furnishes work under supervision for the chronic insane, which makes them at least partially self-sustaining, thus lessening the State's already heavy burden.

It seems to me that sufficient facts have been presented in this group of papers to convince the most skeptical that in her treatment of the insane Texas is far behind her march of progress along other lines, *when we accept the modern idea that insanity is a diseased condition requiring careful analysis and scientific treatment.* Then why cannot our lawmakers and politicians, although far apart on many important questions, for the sake of humanity, of scientific advancement and of the name of our fair State, combine on a program for the relief of this unfortunate and embarrassing situation?

ABSTRACT OF DISCUSSION*

Dr. F. S. White, Wichita Falls: I have spent nearly 20 years in asylum work in Texas, and consequently have had splendid opportunity to know about the condition of the insane and their care and treatment in this State. I know that what has been said is correct, but the important question is, "What can be done to improve these conditions?" I have pleaded with legislative committees, county judges, medical societies and newspapers, to arouse interest sufficient to get something done, but without much success.

While the conditions in Texas are far from ideal, yet we are no worse off than other states with similar populations and economic conditions. There are about seven thousand cases in the asylums in Texas, and they are maintained at a per capita expense of about $240.00 per year. New York has forty thousand cases in her asylums and the per capita cost is $325.00. The thing to do is to arouse in the hearts of the people such a strong sentiment that it will force the Legislature to enter upon a comprehensive plan for the treatment and care of all these unfortunate citizens and make it possible for every acute case to be immediately sent to an asylum where scientific treatment may be obtained. It is common for people to look upon an insane person as one apart, not realizing that each person is a mother, father, brother or sister of someone, somewhere.

Insanity is a very curable disease. If proper treatment is given very early, it has been estimated that from 75 to 80 per cent will recover. There seems to be prevalent, not only among the laymen, but to a considerable extent among the medical profession, the erroneous idea that no treatment is given in the asylums and that no effort is made to treat and cure such cases. The fact is that active and scientific treatment is given in every asylum in Texas, and nothing *that is available* is left undone that might aid in recovery. The results obtained prove this; my statistics show that last year over 52 per cent of the cases admitted were restored. Many more were so far improved that they were returned to their homes and friends. Now, I do not consider this a bad showing, and it absolutely controverts the idea that nothing is done, and that no treatment is given, looking to the cure of cases. Of course, there is in every asylum an accumulation of chronic and incurable cases that only require custodial care.

If the Legislature could be prevailed upon to furnish more money in order that more physicians could be employed and better and more equipment supplied, then better results could be had.

Dr. Allison (closing): The State of Texas has acknowledged its responsibility in the care of the insane by establishing State institutions for their care, but at no time has this care been either scientific or adequate. There are at least 2,000 insane now poorly cared for in their homes, or in the jails or poor houses. This not only deprives the patient of the proper opportunity for treatment and recovery, but it is a disgrace to the State when these patients are confined in the jails and poorhouses and is a severe strain on the family that has to care for their insane at home, where they continually run the risk of suicides and homicides. The private institutions of this State have done much to relieve the situation, but in the majority of instances the patient's family cannot afford a private institution.

The layman cannot be expected to understand the situation and, since it is a medical matter, it is up to the medical profession to take the initiative in bringing about the needed reforms. The State Medical Association can do this if it will, and it is to be hoped that this program will stimulate sufficient interest among the physicians of this State to carry out the needed reforms.

*Papers of Drs. W. L. Allison and J. A. McIntosh.

Glyeuthymenol Not Accepted for N. N. R.—According to Nixon, Stuart and Barker, Glyeuthymenol is "a scientifically formulated combination of Eucalyptol, Thymol, Menthol, Sodium Benzoate and Zinc Sulphate with a Glycerin base." Glyeuthymenol is to be applied to the cervix by means of a special applicator and, according to the label, it is "indicated in leucorrhea and as a vaginal antiseptic and prophylactic." The advertising designates Glyeuthymenol as a "vaginal prophylactic" and stresses its use as a preventive of gonorrhea and as a contraceptive. The Council holds Glyeuthymenol an unscientific mixture that is sold with claims that are misleading and unwarranted and the use of which is inimical to the public health.—*Jour. A. M. A.*, Nov. 15, 1924.

ALCOHOLIC AND DRUG ADDICTS—THE LEGAL PHASES OF THEIR CARE.*

BY

JOHN S. TURNER, M. D.,
DALLAS, TEXAS.

It has been said that every race and every nation of people have had their favorite intoxicant and narcotic. If that be true, it would seem that at this time all races and all nations of people have become of one mind in the adoption of such an intoxicant and narcotic.

Since the commerce of the United States has become established in every clime and in the islands of all the seas, we find that the use of two drugs, alcohol and opium, have become the favorite mediums for self-poisoning. It is axiomatic that the same ship that carries the missionaries with their Bibles, also carries a cargo of these habit forming drugs. While the other nations of the earth are consuming large quantities of these deadly drugs, our own United States is also becoming steeped with these poisons. It is said that at least one and a quarter million Americans are victims of the drug habit, and that a fourth of these are not usefully employed.

"One out of every eleven prisoners arriving at Sing Sing last year was a drug addict. The percentage of convicts who are dope fiends is ten times as big as six years ago. And half of these prisoner-victims of the drug habit are second termers." So reports Dr. Amos Squire, Sing Sing's head physician. Capt. Richmond P. Hobson, president of the International Narcotic Education Association, says, "It is estimated that more than nine-tenths of all murders, hold-ups and daring robberies are now committed by drug addicts."

At one time, the habitual and intemperate use of these drugs was largely confined to the so-called "Under World," but not so now. They are at this time being used more promiscuously than ever before in the history of the country. We now find them in use in all walks of life, from the "jellybean" and "flapper" of high-school age to the business man and society matron.

"The drug habit is making its greatest gains among the youth of America," says Captain Hobson, who places the average age of the heroin addict at twenty-three, "The majority must have been recruited before the age of twenty. A youth will become an addict in ten days and a mature man in thirty days."

Why was the intemperate and notorious use of these drugs largely confined to the underworld for a long time? Was it because the underworld was living such an abnormal character of life, and therefore required assistance of an abnormal sort to secure the necessary repose and rest? Do you not think that after extended debauches, repeated night after night, that the nervous system would become so outraged that it would be necessary to make it drunk or to benumb it with narcotics before sleep would be possible? If that be true, is it not likewise true that the same outraged condition of the nervous system due to abnormal living in this, and in other respects, has brought the business man and the society woman of today into the same class of addiction? It is not contended that the masses of people, or the said business man and society woman of today, are living the same unconventional life and are practicing the same immoral debauchery that characterizes the underworld, but we are nevertheless living an abnormal and unnatural life, far different and more nerve racking and nerve "wrecking" than the life lived by our parents only a few short years ago. Everything from the food that we eat, the clothes that we wear, the entertainment that we seek, our mode of communication, transportation, etc., is different and more nerve destroying than that of our forefathers.

The present day routine of life has become so complex and so out of harmony with the normal methods of living of our ancestors, and the change has been so rapid and so radical that nervous systems inherited from them fail and refuse to recognize this as the normal life and out of sheer abnormal exhaustion, cry out for relief. This relief is gained through that further abnormal and unnatural process of slugging the nervous system into unconsciousness by the use of alcohol, narcotic drugs, or both.

Until recent years the Government regarded the individual as his own free moral agent and refused to pass so-called sumptuary laws or laws that took from him his "personal liberty." But lately, prohibitory laws have been placed upon the statute books, that make the use or possession of alcoholic or narcotic drugs, except under certain conditions, a criminal offence punishable by fine or imprisonment, or both. So long as the use and abuse of these drugs was confined to a violation of the natural and moral laws, not much was said about them, but now since their use and possession has become a violation of the criminal law, society has become aroused.

It is a hopeful sign to see the public conscience so quickened upon a subject of such

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 30, 1924.

vital importance to posterity. Captain Hobson has wisely recommended that the peril of narcotics should be taught to all children in the schools. Education is the most effective back-fire to build against the drug traffic. The medical profession and the sociologists have been clamoring for relief for these poor creatures for lo these many years, but until recently these addicts were ignored. But now since coming into conflict with the criminal law, the attention of the public has been forcibly directed toward them. Since the possession of narcotics has become a crime; and the sleuths of the law have become multiplied and their vigilance intensified, there is a clamor for treatment, care and cure of these unfortunates, and, to the surprise of the public, there is no law or proper institution for such treatment, care and cure.

Many of the aged and infirm might as well, and even more humanely, be condemned to the electric chair, for they cannot be taken off the drug without proper institutional care and treatment, and some of this class not even then. Yet, the statutory law brands them as criminals if they do not give it up, and a natural law, long outraged, condemns them to death if they do. There should be a provision in the law permitting a hearing before the county judge if the State is handling the matter, or by the United States commissioner or district judge, if the federal government continues to handle these cases, in the interest of the aged or those who are organically too infirm to be taken off the drug without seriously endangering their lives. When one is adjudged to be in this class, then a permit should be issued permitting him to have a sufficient amount of the drug to meet the exigency of the case. This provision should be very carefully safeguarded to prevent abuses arising. Such a permit should be issued only upon an unquestionable statement as to the necessity for the drug to prolong life.

This would legalize the use of these drugs where they are needed and would assist in circumventing the bootlegger. The law should be further amended regarding the latter named gentry, so that graduated penalties would be assessed, a third conviction meaning incarceration for life, upon the ground of his being an undesirable citizen and a menace to the community at large.

A humane medical profession, if given a chance and a place to work, will fill the breach and restore many of these outcasts of society to themselves and their families. Before the law of medicine can be properly enthroned in these unhappy cases, it will be necessary to have positive legislation upon the subject. There is no legal way by which these unfortunates can be restrained and treated at this time, and it is next to useless to try to treat them as voluntary patients; as that has been tried repeatedly and has been abandoned by most reputable institutions.

The insane may be arrested and committed to a proper institution where the law authorizes restraint and treatment; not so with the drug or alcoholic addict. To be a drug or alcoholic addict, *per se*, is not against the law, but to be caught with the alcohol or narcotic drug is against the law. In the case of the mentally aberrated, it is only necessary to prove that the individual is insane, in order to secure a commitment to an institution for care and treatment. The same should be true of the alcoholic or drug addict, who, if possible, is more dangerous to himself and the community at large, than is the insane individual. Many of the insane are restored to their proper mental status and to their former usefulness as citizens, when given treatment early; while but few are restored if treatment is long delayed. The same is true of the alcoholic, and especially of drug addicts. If they could be apprehended early and given proper institutional treatment before serious inroads had been made upon the nervous system, a large percentage of them could be entirely cured. Like the insane, after a long lapse of time, the central nervous system undergoes organic changes from which the individual does not recover.

Proper laws should be passed, authorizing apprehension, restraint and treatment of this class of sufferers, somewhat similar to the lunacy laws now on the statute books, except that these cases should be investigated and adjudicated by a board of physicians sitting with the county judge or some other judicial officer, instead of being tried by a jury of laymen who know nothing of the disease from which these unfortunates suffer. The passage of such laws by the State would necessitate an additional institution to our present eleemosynary system. This institution should be especially built and equipped for the care and treatment of these addicts. If thought best, the United States Government instead of the State could handle these cases along similar lines in institutions suitably located over the country.

This institution should be manned by the best medical talent obtainable and the appointment of its staff should be at once divorced from the realm of politics. There should be departments of an industrial, recreational and vocational character. Suitable provision should be made also for phys-

ical culture, health building and moral training. The law should permit the issuance of furloughs at the discretion of the superintendent of the institution, and likewise a recommital of patients, should the same be found necessary on account of relapse, or for other causes. The amount of money that is being spent now for the operation of the Harrison Narcotic Act would go far toward the maintenance of such an institution in each state, not to speak of the humanitarian side of the case and the rehabilitation of the individual as a useful member of society. This institution should be limited to the treatment of acute cases; those that become chronic are usually the old demented or mental cases and should be sent to a proper institution after being cured of the habit. One year should be the limit of time for which a patient should be kept in this institution.

In my humble opinion, satisfactory progress in the treatment of these cases will not be made until some such laws are passed, and only then will we be able to restrain, control, and treat successfully, the unfortunate alcoholic and narcotic drug addict. We may discuss, theorize, and sympathize all we will (that is what we have been doing for so long in the past) but curative results will remain negligible until some practical measures are adopted, giving some local tribunal the authority to have these habitues apprehended, adjudged, restrained and treated.

THE PRESENT STATUS OF THE PUBLIC HEALTH LAWS OF TEXAS; WITH SUGGESTIONS FOR NEEDED CHANGES.*

BY

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A state cannot reach the summit of industrial prosperity without first taking heed to the health of its citizenship. The index to the efficiency of the producer can be absolutely measured by the state of his health.

The laws of Texas relating to public health were passed at a time when all our efforts were centered around international quarantine, and have never been amended to meet the demands of modern health conservation. *The present State Health Department is legally a quarantine service.* The legislative act creating this department provides (Art. 4521) for the appointment by the Governor of Texas of a State Board of Health consisting of seven members, who shall be legally qualified practicing physicians, one of whom is appointed State Health Officer. Their terms of office are for two years. Article 4524 provides for the following officers and assistants to be appointed with the consent of the governor: Assistant State Health Officer, salary $2,400; Registrar Vital Statistics, salary $2,400; Chemist and Bacteriologist, salary $1,800; Stenographer and Bookkeeper, salary $1200, and one Inspector, salary $1,800. The McNealus Antistream Pollution Act of 1913 added one inspector at a salary of $1,800, and in 1917, the Vital Statistics Law was amended, providing for a deputy state registrar at a salary of $1,500. The State Health Officer's salary according to this act is $2,500. He has charge of state quarantines, which until 1919 covered Texas seaports and the Rio Grande river border (9 stations); these are now operated by the U. S. Public Health Service.

Article 4528 defines the general powers and duties of the State Board of Health.

"The State Board of Health shall have general supervision and control of all matters pertaining to the health of citizens of this State, as provided herein. It shall make a study of the causes and prevention of infectious and contagious diseases affecting the lives of citizens within this State, and, except as otherwise provided in the Act, shall have direction and control of all matters of quarantine regulations and enforcement, and shall have full power and authority to prevent the entrance of such diseases from points without the State, and shall have direction and control over all sanitary and quarantine measures for dealing with all diseases within the State, and to suppress same and prevent their spread. (Acts 1913, p. 147, Sec. 1, amending Acts 1909, p. 340, Sec. 9, thus superseding Art. 4528, Revised Statutes, 1911.)"

The Legislature has recently placed the Food and Drug Department under the jurisdiction of the State Board of Health; this completes the permanent legally created organization.

As the result of certain emergencies and the obtaining of special appropriations, the Department has eight Bureaus today, five of which are temporary, dependent upon begging appropriations from session to session for their existence; and by studying the last appropriation bill you will see that some of these bureaus have been provided with funds for salaries, but with insufficient funds on which to function. The scope of the present law is too limited and the health problems are too great, to be properly handled by the inadequate personnel and the limited funds appropriated.

Art. 4554 (4321). Governor Empowered to Issue Proclamation, When.—The Governor is empowered to issue his proclamation declaring quarantine on the coast or elsewhere within the State, whenever in his judgment quarantine may be necessary; and such quarantine may continue for any length of time as in

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 29, 1924.

the judgment of the Governor the safety and security of the people may require. (Acts 1891, p. 188.)

The State Health Department has been a great burden on the Governor during the past three years. The present incumbent is the fourth State Health Officer during this period. The Department has led a rather precarious life due to the low salaries paid and insufficient funds provided, to the use of political prestige in obtaining appointments, to lack of coördination of effort (no definite liaison of the bureaus, and duplication of service by different units.) Political appointment brings together strange bedfellows and does not promote harmony and efficiency in any organization.

Texas, the greatest State, possessing its vast resources of lumber, oil, mineral, livestock, agriculture, factories and other industries, has a wealth valued at $9,850,896,000, and has a population at this time of about five million people. In recent years she has been forging her way toward commercial supremacy at a rapid rate, and in so doing public health has been neglected. Texas is operating under health laws that are, indeed, primitive; in fact, her present State Health Department is just an overgrown quarantine service which has reached its present state through a process of personal effort, without full legislative sanction and coöperation.

Geographically, Texas occupies the unique position of being the gateway to and from the tropics, having four rail ports and will soon have five open seaports. Her health problems are of importance to all the United States, being only 24 hours by rail and 48 by water from the endemic centers of yellow fever, bubonic plague, typhus fever, smallpox, tropical dysenteries and pernicious types of malaria. Have you not observed that dengue fever makes its appearance in Texas a short time after its appearance south of the Rio Grande River?

Her rapid settlement by emigrants from the old world brings to us their endemic diseases, typhoid fever and dysenteries. In other climatic conditions and the character of terrain are so varied that we have confronting us many endemic disease problems. In certain sections it is malaria, hookworm diseases, typhoid fever and dysenteries. In other sections where the rarified air of Colorado without the excessive altitude, is tempered by the salubrious climate of Florida without its fog and humidity, we find the Mecca to which tuberculars from everywhere come to get well or die.

During the winter we have the respiratory problems, smallpox, diphtheria, scarlet fever, mumps, measles, etc., that require careful study and supervision to prevent epidemics. The venereal problem with its sequelae of blindness, imbecility, delinquency, insanity, and frequently, epilepsy, we have with us always. There is an abundant field for research and real epidemiological work in Texas.

Our Sanitary Code still requires quarantining for the control of smallpox, instead of requiring vaccination for immunity; the law requires dependence upon gaseous fumigation in the eradication and control of contagious and infectious diseases. The law permits a school board to exclude a child from school when it has mumps, measles, whooping cough, conjunctivitis, etc., yet denies the local health officer the right to exclude this same child from the picture shows and other public places, unless the case occurs in an incorporated city that has an ordinance compelling the isolation of those suffering from the infectious diseases of childhood.

Texas law requires us to place our insane in jail and give them the same fair trial we would a horse thief, before a jury of laymen who decide if this mentally sick patient may be sent to a hospital for treatment. The law does not require an asylum to admit an insane epileptic because he has fits, and does not require the Epileptic Colony to admit him because he is crazy. We become frantic if a rat infected with bubonic plague is found in Texas, yet look with seeming indifference upon a child suffering with a communicable disease; we permit him to spread the infection wherever he may, yet the sequelae of childhood diseases are often a severe handicap all through the victim's life. Texas has at present 1,204,270 children of the scholastic age. From a public health standpoint, are we (the entire citizenship of Texas) giving these children a square deal?

I am informed by the Bureau of Vital Statistics that there were reported for the year of 1923, 8,831 deaths from communicable disease, this probably representing 40 per cent of the actual deaths occurring. The Bureau of Communicable Diseases states that there was reported the following number of cases during 1923: anthrax, 14; chicken-pox, 1,367; dengue, 999; diphtheria, 1,364; dysentery (epidemic), 100; encephalitis (lethargic), 11; influenza, 14,302; measles, 4,257; meningitis (cerebro-spinal), 12; malaria, 21,268; leprosy, 11; typhoid, 933; paratyphoid, 26; poliomyelitis, 15; pneumonia, 898; rabies, 5; scarlet fever, 807; smallpox, 669; trachoma, 179; tuberculosis, 2,306; typhus fever, 2; whooping cough, 2,018.

Dr. Tate estimates this to be probably 25 per cent of the actual cases occurring during

the year. Add to these the industrial diseases, the inspection of food and drugs, the control of water supplies, the housing problem, the severe types of epidemic and pestilential diseases, and it is very clear that the health work of Texas is extremely important.

I invite your attention to the annual reports of the State Board of Control for the fiscal year of 1922-23, covering the eleemosynary institutions of Texas. The total enrollment was 11,756. The daily attendance was 10,793. Of these, 7,354 were insane, 728 epileptics, 252 feebleminded, 256 blind, 475 deaf and dumb (white), 172 deaf, dumb and blind (negroes), 42 dependent and neglected children, 78 in the Girls' Training School, 1,065 in the Juvenile Training School, and 371 tuberculous. The total expenditures were $2,726,080.61, or a per capita cost of $262.35.

I believe that the 1,143 children in these training schools should have a careful physical examination with serious psychiatric study, and should be handled and treated according to the findings. Many of them, no doubt, are better subjects for a psychopathic hospital than for an institution of correction. A careful study of the financial features of this report shows that divorcing the management of these institutions from politics and placing them in the hands of the Board of Control, has resulted in greater efficiency and splendid economy. As a taxpayer of Texas, I here desire to compliment the Board of Control for their splendid custodial care of these unfortunates at this economic cost.

There is another angle to the public health problem. The penitentiary, in 1923, had a daily population of 1,801 convicts, among these were an average of 130 tuberculous. The prison commission informs me that they isolate all the tuberculous on one farm for treatment, and that if a prisoner develops insanity he is adjudged insane by a court of proper jurisdiction and transferred to a State asylum. What would a psychiatric survey of these institutions show?

Having looked into the situation from several angles, we reach the following conclusions: The problem of health conservation in Texas is an extremely important one, and the present State Health Department is not properly constructed to do the work completely and efficiently; the finances provided for that purpose are too limited; the Health Department must be divorced from politics; the eleemosynary institutions have been divorced from politics and placed in the hands of the Board of Control, with a splendid increase in efficiency and decrease in waste; the Board of Control furnishes only custodial care of the health wrecks; and the State Board of Health, whose duties when properly performed conserve human health and life, should be reorganized.

I would suggest that a bill containing the following principles be written and offered the Legislature for enactment:

1. A State Board of Health composed of nine members, representing the various specialties of scientific medicine, and whose terms of office shall be 6 years (the terms of one-third of them to expire every two years), shall be appointed by the Governor, after nomination by the Board of Councilors of the State Medical Association. No member of this board shall be eligible for employment in the Health Department for a period of two years after his term of office has expired.

2. The board shall select and employ a State Health Officer, who shall be executive of the State Health Department, and whose term of office shall be only for the duration of efficient service in administration of the department.

3. The State Board of Health shall hold examinations for ascertaining the qualifications of all applicants for appointment in the department, and shall certify those standing a satisfactory examination to the State Health Officer as specially qualified to be employed.

4. The scientific personnel of each State eleemosynary institution and the penitentiary system shall be required to pass a physical and professional examination before this board and be certified to the State Board of Control as eligible for appointment, before they are employed.

5. The responsibility for the scientific treatment of each ward of the State, and also supervision of the hygienic and sanitary conditions of all State institutions, the penitentiary system and the public schools shall be placed in the hands of the State Health Department.

6. Sufficient high class, well paid personnel shall be provided to perform the duties imposed.

7. The department coördinated and all overlapping efforts now existing in public health work abolished.

8. Adequate financing of the department in some permanent form, shall be provided for.

SUMMARY.

1. The Sanitary Code is crude and antiquated, and must be revised to provide modern methods of control of communicable disease.

2. The State Board of Health must be removed from politics and reorganized so as to be able to do real epidemiological work.

3. The department must be properly financed.

4. The Constitution of Texas does not permit a State department to usurp the rights of local government, and in the plan for reorganization, the proper coördination of city, county and state efforts must be made.

5. Under the present law, the State Board of Health cannot "legally" declare a quarantine except on the proclamation of the Governor; hence, under the present conditions, the department and its functions are tied by law to the Governor's table leg.

6. The public health problem is a problem of all the people and not a doctor's problem, *per se*. As it is impossible to entirely sever the preventive measures from the curative measures, therefore it is very important to have liaison and coöperation between the physicians and the laymen of Texas.

CO-ORDINATION IN HEALTH DEPARTMENTS.*

BY

MALONE DUGGAN, M. D.,
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Coördination of the State Health Department is, in effect, the directing of the activities of each of the bureaus towards one purpose. No part can be larger than the whole; neither can any one bureau express the full interest of the department. The purpose of a bureau is to concentrate special activities for more economic administration and greater efficiency. But it is the combined efforts of all the bureaus that determine the final product of the department. What reflects upon one bureau reflects on the entire department, so that the department cannot be stronger than its weakest bureau.

Coördination, therefore, is the business of bringing the efficiency of each bureau up to a standard and directing the bureaus in such a manner that where they make contact with each other, there will be no duplication of work, and that there will be an understanding on the part of each bureau as to its relative position to the whole department. The health officer may be likened unto a general practitioner who has the welfare and responsibility of his patient in his hands. He gives the case his personal consideration, calling in specialists to meet certain indications when necessary, and when all the desired information is obtained, he then directs the course of treatment. The bureaus are the specialists whom the health officer consults.

How this idea may be best accomplished is, perhaps, a matter of individual policy to be adopted by the health officer responsible. I believe, however, that there are certain basic principles on which constructive coördination could be established.

In the first place, it is essential that harmony should exist in the bureaus. There must be no trouble-makers or misfits, and when one is found, he should be dismissed. Loyalty and service must be exacted of every employee, and the best way to secure this is to make each one feel that his position is secure so long as he performs his duty, and that he will not be displaced, for political reasons, by the appointment of somebody's favorite. In order that the head of a bureau may be held responsible for his work, he should have the privilege of selecting his own personnel, just as a carpenter should select the tools with which he performs his work. Therefore, the organization of the State Health Department should be so founded that it would permit of this practice.

In the second place, that each bureau may be familiar with the activities of all the others, daily conferences should be held with all the bureau directors. These conferences should be so conducted that the points of contact are brought out and plans for coöperation furnished, by which each bureau can help the other without a duplication of work. This ideal will also serve the purpose of further emphasizing the fact that each bureau must serve the interests of all the others, and that each is functioning as an integral part of the whole. Not only in this respect is an employee expected to coöperate, but he must understand that when his services are more urgently needed in some other capacity than that in which he is specifically employed, he must respond to that duty with the same spirit of loyalty.

Just what coöperative service developing out of these contacts is indicated, will depend on the circumstances of the case, nor can any rules be formulated as to a set policy that will apply in every case. But it is only by bringing the bureaus together in this way that the contacts can be formed, and this coöperation established. The problems of any health department will vary and will call for different measures to meet them. For this reason the success of the organization will depend largely upon its personnel.

Any government is good, whether it be monarchial or democratic, if its rulers are good. So with a health department; whatever organization it is operating under, its efficiency will depend largely upon the head of the department. But as public health is so vital to every state and as there is such a loss of effort sustained by frequent changes of administration, there should be some provision made whereby the head of the department will not be affected by political changes. The public welfare demands that our State Health Department be stabilized; that is, organized on a basis that will permit constructive work to be continuously maintained and conducted under definite standards, yet flexible enough to be adapted to new scientific methods.

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 29, 1924.

Carbon Tetrachloride-Merck. Highest Purity "C. P."—A brand of carbon tetrachloride medicinal-N. N. R. (New and Nonofficial Remedies, 1924, p. 84). Merck and Co., New York.

THE NEEDS OF THE STATE BOARD OF HEALTH.*

BY

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To sum up all the needs of the State Health Department in one article and read it at one time, would require too much of your patience, time and consideration. I shall therefore launch into the major features of the subject, according to convictions based upon my observation and experience while connected with the Health Department, one year as Assistant State Health Officer under Dr. J. H. Florence, and one year as State Health Officer.

It is most essential that a statutory change be made in the method of selecting a State Health Officer. He should be elected by a board, or commission, composed of such men as the Councilors of our State Association, and to include one or more business men. He should hold office as long as he is giving 100 per cent service, and his removal should be left entirely to a majority vote of the commission. This commission should consist of from six to nine members, at least two-thirds of whom should be doctors, the others business men or women. It should be appointed by the Governor and confirmed by the Senate, each member to serve six years, the first third appointed, however, to hold office for two years, the second for four, and the third for six years, new members being appointed as the terms of office expire. The Health Officer should be responsible only to the commission, and not subject to the influence of the Governor, or anyone else.

The Health Officer should be given a free hand and absolute control of his employees, with full power to engage and discharge as he sees fit; provided, however, that those employed are capable and efficient; and provided further, that the head of each bureau should be a doctor appointed by the State Health Officer and approved by the commission. No man can run the department if he has to bow to his employees or if he cannot discharge an inefficient employee without ruffling the chief executive or some legislator. Those who have given the matter any thought and who recall the frequency with which the State Health Officer has resigned during the last few years, will agree that it has been either a ship at sea without a rudder, or has had too many captains holding the tiller at a time. It must be run on a business-like basis or continue to drift. Texas has the distinction of having had four health officers in three years—more than Louisiana and some other states have had in 30 years. The Bible says, "The love of money is the root of all evil." It might be said that *lack* of money is the root of most of the evil in health work. Each outgoing Health Officer has given as one of his reasons for resigning, the inadequate salary. However, each knew what the position paid when he accepted it, and that only the Legislature could increase his salary, which it has never seen fit to do. There must have been other reasons also. The department has been referred to by politicians, of my own knowledge, as the dumping ground for political favorites, many of whom were incompetent and others recognizing no authority except their political backers. This misuse of the taxpayers' money should be stopped. The progress or failure of the department is an index, in the minds of the public, of the achievements of the profession, and it is looked upon as being responsible for stamping out contagious diseases. The department is really the medical profession's child, and should have and must have its backing if it expects to navigate the high seas successfully.

The salary of the State Health Officer should not be less than $5,000 per year, and director of each bureau should receive at least $3,000 per year. The present salaries are so meager that they only attract the best material long enough for the doctor to gain the title. The salary of the State Health Officer is only $250.00 per month, and he is required to give a $10,000 bond and face a million dollars' worth of responsibility and criticism. Because of the frequent changes in the department, it has lost a great deal of its prestige and power, and its efficiency has necessarily been reduced by these changes. The department doesn't command the respect it once had.

The appropriations are entirely out of proportion to the demands made upon them, and should be at least doubled by the next Legislature. Texas reaches half way to Canada in one direction, and half way to California in the other; it is the wealthiest State in minerals, agriculture and stock, and ranks among the first in population, but it ranks near the bottom in protecting its citizens against disease. At present, the department is handicapped by having no Assistant State Health Officer and no Statistician, both offices being provided by law but having no appropriations. Texas is big enough and wealthy enough—and ought to have dignity enough—to make decent appropriations for its Health Department, instead of depending upon the Federal Government

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 29, 1924.

and the Rockefeller Foundation in order to function.

The Health Board or Commission should be non-political, should take an active interest in the public health and stand behind the Health Officer. The latter should be given a wider scope of authority in enforcing health laws promulgating regulations.

The State should be divided into from two to four districts, each having a District Health Officer. When epidemics break out in different extremities of the State now, both the force and traveling expenses are entirely inadequate. With typhus at Brownsville, dengue at Texarkana, typhoid at Orange and smallpox at Amarillo, it would be manifestly impossible for the Health Officer and the Director of the Bureau of Communicable Diseases to cope successfully with the situation and at the same time take care of the necessary routine business.

Every whole-time health officer and director of a bureau should be a man who has had at least some training in public health work. You would not begin practicing any branch of curative medicine without training; should you then expect a public health officer to give value received, unless he had made special preparation along that line?

The whole Sanitary Code needs revision. I shall not go into detail, but merely mention some of the important changes needed:

1. Change the law for shipping bodies.
2. Put teeth in the law requiring reporting of births and deaths, so that more than 65 per cent of each may be recorded.
3. The beauty parlor and barber shop law needs a few braces under it.
4. Stop baby-peddling in Texas.
5. The food-handlers' law needs a Wassermann test inserted somewhere in its paragraphs.

There is room for many other improvements which I will gladly discuss with any individual, Legislature or Governor. You should endorse the actions of our present Board of Health and Health Officer, offer them your support and then *do something when called upon.* Unless the department gets support and relief from somewhere, it ought to be closed up and forgotten.

Cleero.—This is labeled "the vanishing shampoo." It is another piece of cosmetic quackery put out by the Van Ess Laboratories, Chicago. Cleero is sold with the claim that the use of soap on the hair is dangerous and that "the free alkali present in most soaps" makes them still worse. The A. M. A. Chemical Laboratory analyzed Cleero and found it to be essentially a perfumed watery solution of soap with free alkali and glycerin.—*Jour. A. M. A.*, Nov. 15, 1924.

THE RELATION OF THE CITY HEALTH DEPARTMENT TO THE STATE HEALTH DEPARTMENT, WITH SUGGESTIONS FOR NEEDED CHANGES IN THE LAW.*

BY

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The relation of the City Health Department to the State Health Department, should be the same as that of any other city department to the State government, that of coöperation. The State Health Department should act as a consulting body for the city departments and should be made up of well qualified and well paid experts in the different specialties of disease prevention and sanitation, whose tenure of office should be sufficiently permanent and secure to enable them to continue their study along their chosen lines, in order that they might at all times be ready to offer the best advice to the city and county departments in their State. They should be able to cope with any outbreak of disease, and furthermore, be competent to teach the cause and prevention of disease.

A City Health Officer endeavors to enforce the State laws as well as his city ordinances. In fact, I sometimes believe it is easier to enforce the State law, as the general public seems to respect it more, and still more for the federal law. This is probably because state and federal laws are not changed as often as city ordinances and the penalties are, as a rule, more severe.

The State Health Department requires the city department to make reports of diseases, vital statistics, etc., and bases most of its own statistics on these reports, therefore it is absolutely necessary that city departments be prompt in complying with this part of the law. The State Health Officer is a collaborating epidemiologist of the U. S. Public Health Service, and all city health officers should be assistant collaborating epidemiologists, as this arrangement gives the use of the government frank, which is quite a saving in postage and also gives a very accurate way of reporting diseases. This method should be extended to take in the county health officers in order that all of our vital statistics could be accurately reported, and Texas taken out of the dark area.

The city health departments should be so well organized and equipped that the State

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 29, 1924.

Department need not be worried with things of minor importance. City health departments should have a sufficient budget to handle the situation in their own cities and call on the State Department only as consultants and for assistance in enforcing the state laws and in health education and propaganda work. I feel that our state laws regarding the handling of contagious and infectious diseases are, for the most part, adequate, but I do not feel that either the laws governing the prevention of disease or the money appropriated for that purpose are nearly adequate. What are some of the needed changes in these laws?

While there are some changes needed, the most necessary procedure, in my opinion, is the creation of a few new laws and the "scrapping" of others. Among some of the needed changes in the laws are in the method of quarantining against diseases. The quarantine regulations should be gone over and amended. Tuberculosis and epidemic cerebrospinal meningitis, according to Rule 14 of the State Code, are not quarantinable at present, merely must be isolated. While bubonic plague must be placed in absolute quarantine, we know that plague (except of the pneumonic type) is not to be feared if there are no fleas or bedbugs present. The deloused typhus patient is not dangerous, and yet, according to the Code, he must be in absolute quarantine; while the tuberculous patient is allowed to have all the visitors he desires and the house need not even be placarded in order that the public may be warned.

I could enumerate other instances but I do not want to go into details. Regulations concerning disease carriers should be inserted to cover those special diseases that are transferred by carriers, such as typhoid, diphtheria, etc. A typhoid carrier is vastly more dangerous than a patient ill with the disease, but under the present law typhoid fever is a nonquarantinable disease. This law might be amended also to include standard laboratory methods by which the presence of a carrier is to be determined, but you can easily see that it is very hard to convince a community that an apparently well person can infect a multitude if he happens to be a carrier.

Another law which needs changing is that governing the operation of a maternity home. This law does not extend far enough; the disposition of the child born in such an institution should be controlled through the juvenile court in order that the selling of babies could be guarded against.

There is no state law governing the midwife; this is much needed, as there are hundreds of midwives practicing in Texas that are totally unfit to treat a woman in labor or a new-born child. Unfortunately, some of these midwives or "grannies" are championed by good citizens, one of whom will often remark, "My mother had eight children and never had anyone but 'Old Aunt Fanny.' I would rather have her than any doctor; cheaper, too." Nine times out of ten if you question closely you will find that his mother was not well for some time before her death or that she suffered from "womb trouble," etc., all doubtless due to neglected tears. Therefore I say this is a most needed law.

Adequate care for the insane, the feeble-minded and the epileptic should be provided for. More and better institutions should be built, at once. Insane patients should have to remain in jail only as holdovers for 24 or 48 hours, in communities where there are no hospitals and in the case of a violent patient. Enough institutions should be built that there would always be a vacancy. The same is true of the Colony for Epileptics and institutions for the feeble-minded, where there are always waiting lists.

As venereal disease has been made a state problem and as it constitutes a source of supply to the institutions for the insane and feeble-minded, the venereal disease problem is a good place to begin with in preventing some of these other diseases that fill up our institutions. The state venereal disease law is a very good regulatory measure, but there should be more funds available for its enforcement, and more state aid to the hospitals and clinics that are conducting this work, in order that the rural communities can share in the benefits to be derived from the treatment of these cases. Venereal disease treatment is also a prevention of insanity, delinquency, etc., and therefore, more attention paid to this work will prevent an increase of paretics and locomotor ataxics, and of hereditary syphilitics and mental defectives.

The testing of all dairy cattle for tuberculosis should be a state activity. It is just as important that the farmer's child drink milk from tuberculin tested cattle as the city child; but such is not the case at present. Unless the dairyman delivers milk to our large cities his cows need not be tested for tuberculosis, except in a few counties. Therefore, many milch cows are tuberculous but are never discovered. They are allowed to run on the open range part of the year, and what is there to prevent the transmission of this disease to the range cattle? If an examination is necessary for shipment in interstate commerce, why is it not necessary to have all cattle that are milked, either for home consumption or for the market, tested by competent veterinarians for this dreaded disease, tuberculosis.

There is at present no state law requiring compulsory vaccination against smallpox except during an outbreak in a given school. Most cities have ordinances governing vaccination in the schools, but there should be a state law requiring successful vaccination before being admitted as a pupil or student to any school or other educational institution. More stringent laws are needed regarding the sanitary conditions of rural schools, their water supply, and other needs which I could enumerate if the time were not limited.

Housing conditions and the screening of tenant farm-houses are really more problems for the county health officer than for the health officer of the city to discuss, but health problems of the city and county are so closely associated that needed state laws are required to put over this great problem of disease prevention. Even the stray dog has learned where the city limits are and is making his home there, safe from the dog-catcher and only making foraging trips into the city at night. A stray dog is just as liable to be bitten and develop rabies outside the city limits as the city dog, and is therefore just as dangerous. Why not pass a state law requiring the muzzling of all dogs, and then make a statewide cleanup of the strays? I believe that will be the only way to rid this State of rabies.

What applies to the needs of the county in health work and rural sanitation, naturally affects the city. What protection from disease the city wants from the state, fits in also with the program for the better sanitary conditions of the outlying districts.

We want protection from vegetables and berries that are polluted by the filth from overflowing open toilets and protection for the motorist or the commercial traveler when he drinks a glass of milk or water at some country cross-roads store. He should also have a clean individual towel with which to wipe his face after washing at the country hotel; also clean food and drinks, clean beds, sheets and other linen. For that reason, it would be better for the State Health Department to keep its inspectors working in the outlying districts that are not inspected by the city departments, instead of having them spend a great deal of their time in the cities, checking up the city inspectors. Place that responsibility on the city health officer, as that is his duty.

State inspectors should be better qualified and better paid and there should be department chiefs who could be called to the assistance of the city departments when necessary, but the ordinary inspectors could render better service to the cities by cleaning up the country districts and small towns.

FULL-TIME COUNTY HEALTH OFFICERS.*

BY

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The Biblical statement that one cannot serve two masters may well be applied to the part-time County Health Officer. If only part of his time is paid for, the balance is devoted to his private interests, and who among us is not human enough to consider these interests of paramount importance? Let us examine his position for a moment from a cool, unbiased standpoint. In all likelihood he is a busy practitioner with a family to support. This he must do by giving satisfaction to his patients, who are his neighbors and friends. They are also the citizens who are affected by the sanitary laws and ordinances which he is required by law to enforce in his official position of County Health Officer. Now the enforcement of these laws and ordinances are by no means always acceptable to our citizens, as they often work a real or fancied hardship, hence there is engendered opposition, dissatisfaction, and at times, even hard feelings towards the representative of the law, and we find the Health Officer placed in the difficult position of antagonizing his patients and friends. For performing this unpleasant and unprofitable duty, he is usually paid the munificent sum of from twenty-five to probably a maximum of one hundred dollars a month.

In addition to this, most unfortunately, the general public sentiment in our counties in regard to the health officer is that he is paid for very little service, and consequently very little is expected of him. His service usually amounts to answering a few calls, to establish quarantine in cases of contagious diseases which alarm the people, and to a half-hearted attendance upon the paupers and inmates of the county poor farm. He cannot live on his salary as County Health Officer, and consequently must make his living by his private practice. Lastly, who cares particularly whether he renders much public service or not?

Is it any wonder then that so large a number of our County Health Officers are practically useless to their counties? Is it any wonder that most of the people in the county do not even know who the County Health Officer is? Is it any wonder that numerous County Health Officers know practically

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 30, 1924.

nothing about the sanitary laws which it is their duty to enforce, and do not even have a copy of the Sanitary Code of the State? This is indeed a most deplorable state of affairs.

Let us turn our attention for a few moments to the necessity for active constructive health work in our counties, and see just what such work can be expected to accomplish. All public health work is a battle against preventable diseases, an effort to reduce unnecessary sickness, to prevent useless deaths, and to increase the span of life; to render the journey through life more pleasant, more profitable, and less dangerous. For the sake of argument, and in order to present proof to those "doubting Thomases" who have little faith in the efficacy of health work, let us discuss preventable diseases and see if we really can control, reduce and eradicate such diseases. The layman may not know what a preventable disease is, and we must therefore point out examples, such as yellow fever, typhoid, malaria and hookworm infection. To prove that such diseases yield to preventive measures it is only necessary to refer to a few brilliant, outstanding examples known throughout the length and breadth of our land.

The French Government, under the direction of De Lesseps, failed to dig the Panama Canal, not on account of lack of funds or the necessary technical knowledge, or a shortage of men, but (as is well known today) solely because of the unsanitary conditions in Panama which took such a toll of human life that the workers were forced to abandon their great undertaking. There is a true saying that for every cross-tie in the forty miles of railroad that crossed the Isthmus of Panama, there was a grave of a victim of disease.

The United States, upon undertaking the project later, came very near making the same mistake as the French. Our men began to die by the thousands from typhoid, yellow fever and malaria, and it, of course, became necessary to overcome this condition. General Gorgas was sent to Panama with a trained force of workers, and the result demonstrates to the world what well directed, understanding, public health work can accomplish. Yellow fever was banished, typhoid and malaria reduced to negligible quantities, *and today, the Canal Zone is a healthier place and with a lower death rate than our great State of Texas.* Other notable results, such as the sanitation of Havana, and the work in all of our large cities, might be referred to. We may say, therefore, that public health work is not only successful, but is an absolute necessity.

You, together with all other citizens of your county, probably think that in *your* county there is very little actual need for health work. It is a very common but fallacious idea that your particular county is the healthiest in the State. In the average county of 40,000 population in Texas, as shown by a careful indexical survey of a number of such typical counties, there are 720 deaths yearly, 266 of these from purely preventable diseases and 60 of these among children under two years of age. There are 1,466 people sick in bed every day in the year, and 290 consumptives who are a potential source in the spread of the great white plague. These facts, for facts they are, are enlightening, illuminating, and alarming, and they should surely upset our false sense of security in thinking that our county is healthy enough not to require health work.

What remedy can be applied? Fortunately, there is an efficient remedy and it is being applied. The county health department fills the required need, but it must be directed by a competent whole-time health officer, a man who gives his entire time and attention to the work, and is paid a salary sufficient to live on and to make his position desirable to him. He must be a man who has had special training in public health work, because such work is just as much a specialty of medicine as eye, ear, nose and throat work. The average practitioner of medicine has devoted his time, efforts and training to curative medicine and knows very little about preventive medicine.

He must also have some trained assistants, as the work is too extensive for one man alone to accomplish much; one or more public health nurses, one or more sanitary inspectors, and a stenographer. This department is supported by the County, State and International Health Board. The foremost health authorities of the United States met several years ago in Baltimore for a three-day conference on county health work, and the plan outlined was decided upon as the best that could be adopted. Since that time the success of this plan has been demonstrated in many states. We may feel, therefore, that with the adoption of this plan, our counties have a satisfactory solution of their public health problems.

The activities in all such departments are to a certain extent uniform, but each county has special problems of its own. Briefly, these activities are as follows: A constant campaign of public health education, by means of lectures, school talks, motion pictures, newspaper articles, literature, and personal advice to householders; anti-soil pollution work, tending to replace all insani-

tary closets with sanitary ones, and ultimately, to the installation of a sewer system; the examination of all school children in the county for physical defects and having these defects corrected where possible; reporting births, deaths and communicable diseases; establishing and maintaining quarantine wherever necessary; investigating and combatting epidemics; carrying on all of the duties of the county health officer as indicated in the Sanitary Code; vaccinating against smallpox and giving antityphoid inoculations; coöperating with all of the bureaus of the State Health Department in order that the county may have the benefit of its entire program; enforcing the sanitary laws and ordinances, and suggesting model ordinances, where they are needed, in the incorporated towns; and lastly, inaugurating such campaigns as each county may need against special diseases, such as malaria, typhoid and hookworm infection.

The County Health Officer, whether he be a whole-time or a part-time man, is required by law to be subject to the State Board of Health to make certain specified reports, and to perform certain duties, and he may be removed from office for non-performance of his duties. In addition to this, he bears a certain relationship to his fellow practitioners of medicine in his county. He should be a member of his county medical society, thoroughly ethical and in good standing. He should attend regularly the meetings of this society, and bring to the attention of the profession all matters of importance pertaining to the public health. He should assist each doctor in the county in investigating the cause and control of all preventable diseases and should gain the confidence and coöperation of his fellows in the profession, in conducting his work. He should advertise his work, *not himself,* constantly, in order that the public may know the value of such work and also what he is accomplishing. And lastly, he should let every householder in the county know that he may be called upon for advice on health protection, and that he is willing and anxious to protect them.

The final success of his work depends upon his own ability, energy, and faculty of making friends and obtaining coöperation. All of this shows the necessity for a whole-time man, well trained, enthusiastic, active and thoroughly in earnest about his work. It is a difficult position with grave responsibilities, but splended results are obtained where the position is well administered, and such services are of untold value to any county, as shown by a material lowering of the death rate, a reduction of preventable disease and an enormous saving to the county and the individual from an economic standpoint. Apply the light of reason to this important problem. Would you advocate for your county an underpaid, undertrained county judge, surveyor, superintendent of public instruction, clerk or auditor? Would you wish in your cities a part-time mayor, or part-time firemen to protect your property? And yet you are satisfied to leave your most valuable assets, your health and that of your wife and children, practically without protection.

As long as you were unaware of the value of such protection, as long as you did not know that you are constantly surrounded by grave menaces that can be removed, you were in no wise responsible for such conditions, but the moment you have had these conditions proven to you you become responsible for their continuance. If, after this, you lose your beloved wife or that little child (more dear to you than all your earthly possessions) from a preventable disease, how can you escape your responsibility in not having afforded them all possible protection?

Your State Health Department, created to protect you, stands ready and willing to coöperate with your county in establishing a County Health Department. If your county commissioners will furnish one-half of the necessary annual budget, the State will furnish the other half, and it becomes your duty to demand of them this vital protection. Sit idle and contented no longer, my friends; interest your fellow citizens in a movement to bring to the attention of your county authorities a problem far more valuable to you than the eradication of cattle ticks or the boll-worm and boll-weevil, for which thousands are being spent from your hard-earned taxes. You are protecting your hogs and cattle, your crops and real estate. Have you no desire to protect your wife, your children and yourself?

This paper is written with no desire to be spectacular or to frighten you, but merely to let you know that others are protecting themselves; therefore, why not you? You are well aware that in the cities a modern health department is considered a necessity and thousands are being spent most profitably for this purpose. Is there any logical reason why you should be unprotected because you live in a small town or in the rural districts? As a matter of fact, the need for protection among rural populations is greater than that of the city populations, as proven by the higher death rate in the rural districts. In the entrance examinations for the army, during the World War, the soldiers from the cities showed a higher percentage

of fitness for service than those from the rural districts. We see, therefore, that the vaunted statement concerning the wonderfully healthful country districts, is a delusion and a snare.

When insanitary conditions, such as openback, surface closets are found, we frequently hear in extenuation the excuse, "Well, my father and grandfather got along pretty well with such accommodations, and I guess they are good enough for me." Our grandfathers managed to get along with an ox-cart, a tallow-candle, and a flint-lock musket. Would you be content with these today? This is the age of enlightenment, progressive invention and applied science. You gladly pay for the latest inventions for your pleasure and comfort; you ride in your automobile and equip your home with electric lights, telephone, radio and phonograph, and yet you stubbornly hold on to that old closet that should be a relic of the Dark Ages. When the grim spectre of death enters your home by the way of the surface closet and the common housefly covered with deadly bacteria, you bear your grief and loss as best you can, and feel that the Lord has sent this affliction upon you—not remembering that the Lord has provided you with a means of protection which you have failed to avail yourself of.

The leading health authorities of the United States believe that true success in public health work in small towns and rural districts depends upon the County Health Department, directed by the whole-time health officer. These departments are the logical medium through which the State Health Department can function to best advantage. Let us have for our slogan, "A whole-time County Health Officer for every county in Texas."

LEGISLATION PERTAINING TO MUNICIPAL SANITATION.*

BY

V. M. EHLERS, C. E.,
AUSTIN, TEXAS.

In carrying out a health conservation program, experience has taught us that legislation is sometimes desirable in addition to education along public health lines. This paper was prepared for the purpose of bringing to light the inadequacies and the fallacies of the present laws relating to municipal sanitation in Texas.

The only legislation relating to the protection of water supplies is contained in the so-called McFarlane Water Act, and the provisions of this act are only applicable to towns having a population of 5,000 or less. All cities having over 5,000 population are exempted from the act. Section One specifies that, "Companies, persons, corporations or receivers who are supplying drinking water through a waterworks system to the public, shall, before supplying same to the public use for drinking water, first cause the supply of water to be tested for contaminated infusion of sand, dirt, filth, or dangerous bacteria, or disease-bearing germs." Several water companies have defeated the intent of this section by advertising that the water sold by their company was not for drinking purposes. Attorneys who have had occasion to study the act, have advised us that it is of relatively small value in the matter of securing water improvements or regulating water supplies.

If the medical fraternity believes that there is a menace in contaminated water being served to the public, it is suggested that the above mentioned act be either amended, or repealed, and another bill enacted which would be applicable to all incorporated towns and villages, irrespective of population, and which would make it a penalty for any person, firm or corporation, supplying water through a system of pipes, to furnish water containing disease-producing organisms.

The Antistream Pollution Act, which makes it unlawful for any person, firm or corporation to pollute any water course or public body of water from which water is taken for the use of farm, livestock, drinking and domestic purposes, is very good so far as it goes; but this statute is only applicable to incorporated cities. Industries producing wastes, located outside of the city limits are not affected by the provisions of the act. The statutes should be amended so as to make it unlawful to contaminate a stream outside of the city limits, as well as inside the city limits, and should also include that territory bordering on the tidewater, where bathing beaches or oyster beds may be affected. The State Board of Health should be given discretion in prescribing the extent to which wastes shall be treated before being discharged into streams.

There are no particular objections to that section of the State Sanitary Code relating to railway sanitation. However, as a matter of standardizing railway sanitation, it is suggested that this part of the Sanitary Code be repealed, and the Standard Railway Sanitary Code, which has been approved by the Conference of State and Provincial Health Authorities of North America, be inserted in lieu thereof.

With the increasing popularity of the swimming pools, suggestions have been made to our department from time to time that those institutions could profitably be regulated as

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 29, 1924.

to the sanitary features of construction and maintenance. Minimum regulations for swimming pools have been passed by the following states: Idaho, Ohio, Pennsylvania, Florida, Arkansas, California and Virginia.

The present Plumbing Act relates to the examination of plumbers and the passage of plumbing ordinances. There is a wide divergence of regulations in the various ordinances—some of which are handicapping progress in this field. In some cities, practically no regulations are enforced, and this has resulted in some instances, according to the Bureau of Communicable Diseases, in the outbreak of typhoid and dysentery epidemics.

I believe that in order to standardize and provide safe plumbing at a reasonable cost, a housing bill which would place minimum regulations on public buildings with reference to heating, lighting, ventilation and plumbing, should be enacted.

Another problem which confronts health officials at this time is the proper disposition of oil field wastes. The statutes are silent on garbage and refuse disposal and the use of the common drinking cup and towel.

It is hoped that the State Medical Association may find it appropriate to offer a prescription or a cure for the ills in the laws as enumerated above.

VENEREAL DISEASE CONTROL.*

BY

C. E. DURHAM, M. D.,

AUSTIN, TEXAS.

There is but one fixed element in education, namely the effort of each generation to realize, express and perpetuate its own ideals in the life of the oncoming generation. Sex education as a need of conscious discipline was ignored until a comparatively recent period. This movement for social purity has developed along three lines: first, the rescue of victims of sexual vice and their restoration, where possible, to normal life; second, the abolition of legalized vice and the repression, if not suppression, of commercialized prostitution; and third, the attempt to prevent injurious sex relationship by education of the young in the right way of living—proper sex instinct control. An open mind on the part of the public (both men and women) and a willingness to face this as a public health problem would greatly facilitate our efforts at venereal disease control.

The question of venereal disease control is one of the most vital which confronts not only public health officials, but the people of the whole nation today. The ramifications of the effects of venereal disease are so widespread and far reaching and its tentacles reach so far into all of our social institutions, that no person can say that his or her life is absolutely immune from its influence. And until the force of public opinion, sponsored by the physicians of our land, can be aroused and its influence directed toward an intelligent consideration of this question, the solution of this great public health problem will not be attained. It presents so many different phases for study that it seems difficult to have the indifferent public concentrate their attention on any of them.

The whole problem of sex and sex relationship, and especially its careful consideration from an intelligent and a rational viewpoint, has been surrounded with too much mystery and has not been considered a legitimate educational subject. The more accurate information the public receives along this line, the more intelligently can the problem of venereal disease control be handled and the more satisfactory will be the results obtained.

The four most prominent avenues leading to the control of venereal diseases are: (1) the discovery of the source of the infection; (2) proper medical treatment; (3) the educational measures for the prevention of venereal disease and for patients while under treatment, and (4) the follow-up work which should be instituted by the physicians and social service workers. Among all the agencies thus involved, there is none more important than the free clinic for the treatment of these diseases. We would not have you think for a moment that we minimize the effective results and the necessity of the many other agencies employed, but we do feel that at the present time this clinic affords us the most important means at our disposal for eradicating the growing menace of venereal diseases to the health and lives of the public. The immediate results are the lessening of the number of active cases and the building for the future of a reduced tendency to other diseases which usually result from untreated cases. The active sources are reduced.

The physicians over the State have been called upon by the Law Relating to Venereal Diseases to help in their eradication by instructing the patient "in measures of preventing the spread of such disease and of the necessity for treatment until cured." They are further called upon to "report such cases, immediately, in writing, to the local health officer." If any doctor fails in this duty prescribed by our State laws, he reflects on the integrity, dignity and high standing of his profession, and is in defiance of an authority which he should feel honor bound to uphold.

There exists an antagonistic viewpoint among some physicians and many laymen,

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that the reporting of cases of venereal diseases deprives the patient of the confidence of his physician in that it makes his secret a recorded fact in the State archives at Austin. His guilt so fastens itself upon the victim that he does not want his health hazard placed where eyes can see it, for he is ashamed of it. But our law states specifically that "it shall be a violation of this statute for any infected person knowingly to expose another person to infection with any of the said venereal diseases, or for any person to perform an act which exposes another person to infection with venereal disease," and that "if an attending physician or other person knows or has good reason to suspect that a person having venereal diseases is so conducting himself or herself as to expose other persons to infection, or is about so to conduct himself or herself, he shall notify the local health officer of the name and address of the diseased person and the essential facts in the case" so that quarantine may be instituted. The law recognizes that an infected person is a personal danger to the health and happiness of the community. Certain special laws, designations and requirements have become mandatory upon our part to observe. If we fail, we have flinched in our duty and trundled our moral obligations to our home, to our community and to our State.

At one time, cases of tuberculosis and cancer were covered up with the same arduous secrecy as venereal diseases are today. But when the public was made to see and realize the menace of the "great white plague," an improvement in conditions was not long in coming. Venereal diseases are taking greater toll than either tuberculosis or cancer at their worst and the public is paying for the false prudery. The one reason why from "60 to 70 per cent of men have had gonorrhea by the time they are thirty years old" is that public opinion refuses to face the facts and put into operation the necessary public health machinery for its control.

No physician understanding the protective feature of the law, can conscientiously ignore it. He can but appreciate its benefits to himself and the rest of mankind. Once a patient becomes familiar with the law, and realizes its ramifications are widespread, he should have enough love for healthy living to have an inherent desire to protect his fellowman from a similar fate. Yet that inward condemnation that he is guilty of having "a horrible disease," haunts his eventide of happiness and makes him feel that he is a social outcast. These diseases should be lifted from behind the curtain of secrecy; removed from the realm of the quack, the dive keeper and the patent medicine vendor, and placed where they rightfully belong among the problems of medicine and social hygiene.

During the year 1923, 125 physicians and 8 clinics reported to this Bureau 15,630 cases of syphilis, 10,629 cases of gonorrhea, and 954 cases of chancroid. Is this not sufficient evidence to encourage the establishment of free clinics, to encourage the education of the people, and to encourage the earnest coöperation of the medical profession and its associates in the observation and enforcement of the laws.

An understanding as to the consequence of any violation of the moral code must be implanted before this has transpired. More field work is needed in the homes and the schools in order that we may have less patients in the clinics and less exposures from the infected. We know that the control of one infection may mean safety to many. As infection is usually by personal contact, it is not difficult to understand the importance of using "any available means to ascertain the existence of and to investigate all cases of venereal diseases within their several territorial jurisdictions and to ascertain the sources of such infection." And "local health officers are authorized and directed to quarantine persons who have, or are reasonably suspected of having venereal diseases, whenever in the opinion of said local officer, or the State Board of Health, or its executive officer, quarantine is necessary for the protection of the public health." Every infected person who cohabits, exposes the second person. Such foci of infection should be as carefully guarded to prevent spread as the clinic should strive to cure. Physicians must come to realize that when they fail to properly treat and carefully guard the infected, they are morally responsible for any new cases which may result from carelessness or indifference to their sworn obligations. Hundreds of cases die yearly in Texas from venereal diseases where one dies from smallpox, yet if you were to fail to report a case of smallpox, try to cover it up, keep it secret, or otherwise harbor legitimate information concerning it, you would soon be branded as one who did not favor law and order, or good health for your community, and who did not respect your obligation, and you would soon feel the pressure of public sentiment. But when you fail to report other infectious diseases many times graver in attack and sequel and to protect your community from them, you "kid" yourself into believing that you are justified in not reporting them; that faith would be broken; that practice would be lost; that it is none of our business, anyway; that it is the

thing to do to keep this grave peril hidden; and that it will not affect you. Remember that no one is safe from its depredations and that by such neglect you may be jeopardizing the entire future of a human being! "Life is not to live, but to be well."

SOME OF THE OBSTACLES RETARDING THE PROGRESS OF MATERNITY AND INFANT WORK IN TEXAS.*

BY

H. GARST, M. D.,

AUSTIN, TEXAS.

Texas has a maternal death rate of 6.6 for each thousand live births, which means that we are losing approximately 800 mothers each year as a direct result of childbirth. This does not include maternal still-birth deaths nor late deaths, and does not consider the morbidity side of the matter. The death rate for infants under one year of age is 76 for each thousand live-births, approximately one-half of which are deaths under one month of age. That gives about 9,000 early infant deaths annually in Texas, and does not include still-births.

The above named rates taken from the registration area of the United States may be challenged for Texas, but until such time as Texans see fit to gather and record vital facts pertaining to births and deaths, we can do no better than to accept facts recorded in states that have gone forward in health matters. The meager statistics available, observation and incomplete surveys, seem to indicate that the rates in Texas are even higher than those given above.

The objects and aims of the Bureau of Child Hygiene in its work for the welfare of maternity and infancy is to lower both the death rate and the morbidity rate. Working toward that end the Bureau has a personnel of 39 employed in educational work. Thirty-one of these employees are public health nurses actively engaged in the field. Intensive public health nursing is in progress in 25 counties on a county-wide plan, and represents educational work reaching 20 per cent of the population of the State. Demonstration work has been done during the last few months or is now in progress in twenty other counties with the view of establishing a permanent service.

The total fund for this work is $72,900. The budget system is used, and the plan under which the Bureau is working is a modification of well-tried methods which have succeeded in other states. The plan not only fits into the present scheme of things, but looks to future expansion. Relief measures not being public health work, the plan is purely educational.

With a definite objective in view, the Bureau is making rapid progress. However, the progress could be accelerated were certain existing obstacles removed.

One of these obstacles is lack of sufficiently complete birth, death, and morbidity reports. Birth reports show approximately 65 per cent of births are reported; death reports from 70 to 75 per cent. The absence of midwife control measures is another obstacle. During the last few months we have located about 1,000 midwives actively engaged in the practice of midwifery in 134 counties in the State. We doubtless have several thousand midwives who are, in the vast majority of cases, ignorant, illiterate, and surgically filthy. These people are doubtless responsible for many deaths, both maternal and infant, and transmit some communicable diseases, notably syphilis.

The lack of control over the personnel of maternity homes and "Baby Farms" is another hindrance. We know of the existence of 91 such places, and there are doubtless many operating in the dark. I do not include maternity hospitals, nor maternity wards in hospitals, and here make no reference to such hospitals. There are more maternity cases and more infants handled through so called maternity homes and "Baby Farms" than one not familiar with the situation would think. These places may be controlled in a way so far as the home is concerned, but practically no supervision over the personnel is possible under the existing laws. It may be likened to the charlatan in his elaborately equipped offices.

The lack of a broad, liberal, and sympathetic understanding of the problems involved in child welfare, and the absence of a State Child Welfare Division to unify efforts and fill in the broad gaps now existing is keenly felt. Available funds are insufficient to extend activities and to expand territory. Only about 15 per cent of the rural population as taken by counties is being reached by anything like intensive work. A much higher percentage is being reached in a general way, but not intensively.

There is a normal resistance to all progress. In the case of the maternity and infancy work in this State, the resistance is far above normal, and cannot be materially reduced until some obstacles are removed. Only those obstacles which seriously handicap and which can be removed with a minimum of effort have been considered here. In order to accelerate the Bureau's progress

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the following remedial measures are suggested:

1. Enforcement of vital statistics laws. This must be done by educating the masses to the very great importance of birth, death and morbidity reports, and by vigorous prosecution of deliberate violations of the law.

2. Regulation of the practice of midwifery. This would require that midwives be licensed annually and only after they have passed a satisfactory educational and physical examination. After the licensing process has eliminated the more undesirable, attempt to educate those licensed.

3. The present maternity home and baby farm laws should be amended so as to regulate the personnel in charge of such homes.

4. All public health workers should assist in disseminating correct information pertaining to the many phases of child welfare.

5. All organizations and individuals interested in public health work, go seriously about the matter of securing a sufficient appropriation to enable the Bureau to meet the demands made for its services.

The medical profession is abundantly able to secure the removal of the obstacles which are retarding the progress of maternal and infant welfare work in this State, and by so doing it will have performed a service to womankind, to innocent infants, and to the State which no other organization could have performed. We, as medical men, by so acting will have lived up to a trust placed in us, and will have performed a duty which each one imposed upon himself when he entered the medical profession. While this individual service may not always be a legal requirement, it is a professional duty which we will not shirk and it is a moral obligation which we cannot and will not avoid.

ABSTRACT OF DISCUSSION.*

Dr. Malone Duggan, Austin: We trust that the medical profession will induce the next Legislature to pass better laws and make needed changes in the Health Department. The question of communicable diseases always brings up the question of the Sanitary Code. At first it was efficient and served the purpose, but because of the progress science has made since it was written, it is no longer meeting the requirements of the modern health laws. It must be changed, and one of the efforts of the department will be to get it corrected. The code, of course, will stand as it is and must be adhered to until it can be changed. The department requests that suggestions be sent as to the changes that should be made. All these suggestions should be in the hands of the department before the next Legislature.

As to the midwife question, I will say that the State Board of Health will not interfere with anything that makes for improvement. The El Paso ordinance is very good, and if all cities had such an ordinance it would be much better. The State Health Department has no objection to such ordinances, and feels that with such rulings we could much sooner be placed in the registration area.

The maternity home question is new. The suggestion of fewer homes is very good. The Health Department is trying to remedy some of the frightful situations, but owing to the present laws, very little can be done. The meeting of this section today is a very important one. The Health Department is open to constructive criticism, and will appreciate any suggestion that may be made. Such papers as Dr. Durham's are most important and should be published in the daily press. Dr. Garst is doing an excellent work. His nurses are disseminating a vast amount of knowledge.

It will be some time before whole-time health officers will be available over the entire State. We hope to be able soon to give aid to any county; we are now in a position to help some, but not as much as desired. It is our purpose to redistrict the State and place over each district a State Sanitary Engineer to advise with each County Health Officer of this district. The greatest trouble with the health officer, in general, is not a lack of willingness to perform his duty, but lack of information as to the duties of a health officer. With the advice of a sanitary engineer, he can function much better, and we hope soon to be able to give this assistance. Any advice wanted can be given now if it is asked for. If the bill which we want is passed, we can have an engineer on the job all the time.

Dr. A. L. Lincecum, San Antonio: The State Health Department is performing the most important business for the citizens of Texas; that is, preventing disease. They are handicapped by poor laws. The citizens are investing good money and want good results. The discrepancies in the laws can only be repaired by legislative acts. We all want to get our money's worth and want the best service obtainable. Your ideas and views are needed so that a bill that is to be drawn up will have the coöperation of the profession and the laity. The laity should be interested in their own welfare.

There is no criticism of the personnel of the Health Department. They are doing the best they can under the circumstances. I have been associated with the department, and hence I know the great disadvantages they work under. Write the State Health Officer and give him the ideas of your section of the country.

Dr. McClelland, Clovis, N. M.: The laws of New Mexico are a little different from those of Texas. Near 50 per cent of the counties in our State have full-time health officers. The money is raised by a half-mill tax. Each County Health Department has a health officer, a technician and a Shepherd-Towner nurse. Compulsory vaccination for school children is a State law. It is also a State law that all measles be quarantined. Investigation has shown that, in proportion to the population, New Mexico has as good a Health Department as any State in the Union.

Dr. Alex Harrison, Austin: It is a pleasure to know the attitude of the State Health Department on these problems. In his address, the chairman stressed the necessity of public health work, as did the President of the American Medical Association. It is vital that the State Health Department be reorganized, not as to personnel, but as to the laws. It is the intention of the State Board of Health to introduce a bill with the revisions and amendments that are needed. The form is not yet fully decided upon, and so we want the advice and coöperation of the doctors, and then a proper bill can be drafted.

The doctor stands high in his community and his opinion is always respected. He can have influence

*Papers of Drs. Allison, McIntosh, Turner, Lincecum, Duggan, Beazley, Flickwir, Harrison, Durham and Garst, and V. M. Ehlers, C. E.

with his legislators and senator if he will see them or write them personally and ask them to uphold and defend the bill. Get in touch with the candidates and find out where they stand upon the questions relating to the Health Department.

Dr. W. M. Brumby, Houston: It has already been demonstrated that full-time health officers are much more efficient. In small places, owing to limited means, it is difficult to institute full-time health officers, but even in small places to accomplish anything, we must have them. The general practitioner knows the usefulness and value of sanitation, but he is the same as any other busy man, he cannot devote the time. He knows the use and value of his microscope, but time will not permit him to use it to best advantage. Most men have too many irons in the fire and some of them must be neglected.

Any county that will spend the money for a full-time health officer, can do so with beneficial results. Many children could be protected if the eyes of the people were open to the value of full-time health officers. It is not so much a matter of the deleterious ingredients that are put into our foodstuffs, as it is the extracting from our foods of the growth-producing and nourishing substances from meal and other foods—the growth vitamines are all removed. The negro child, today, eats the same character of food as before, but the vitamines have all been removed from the meal. Every negro child, today, should have a balanced ration of cornbread, fresh milk and an apple a day, and the child will then grow.

Dr. C. E. Durham, Austin: There were only 125 men in Texas who reported venereal cases in 1923, with 8 clinics. These few reported 27,000 cases, and if all practicing physicians had reported, there would have been many more thousands than were reported. The importance of the subject cannot be appreciated by the laity. The law states emphatically that cases of venereal diseases must be reported and provides for a penalty. Venereal diseases are communicable by direct contact and are very dangerous, and hence the necessity of passing special laws to govern them.

A special request is made by the Venereal Disease Bureau that you report your venereal cases to the department. The law is for the protection and benefit of us all, and it is the duty of the doctor to report these cases.

Dr. J. R. Mahone, Pharr: Having served at different times as a part-time city health officer, part-time county health officer, and whole-time county health officer, I feel that I can consider Dr. Harrison's paper from the angle of both the part-time and the whole-time health officer. Since taking the position of whole-time health officer of Hidalgo County, I have been able to accomplish a great deal more than when acting as part-time officer. Many part-time health officers of small towns get no pay for their services, and I know one who gets only $15.00 per month. Such men cannot put much of their time into the work and cannot afford to antagonize their best clients, as is sometimes unavoidable in health work. Some of the health officers of my county "pass the buck" to me on some of their disagreeable work, knowing that I, as a whole-time health officer, have no practice to lose. I encourage them in this. I hope the time will soon come when we will have whole-time health officers in all counties.

Dr. John Hunter, La Feria: One reason why doctors in the small towns do not report the cases of venereal disease is because of the close relationship between patient and doctor. Another is that when a woman is found to have gonorrhea, the city officials will arrest and send her into another county. This is done in some cases even after the local health officer has offered to treat the cases, the excuse being that the city does not have the finances. Until such conditions can be prevented, the spread of the venereal diseases will continue unabated. The papers read here today are all good, and we doctors know their value, but they should receive wide publication in the lay press. This would be a means toward suppression of these diseases.

Dr. A. S. Garrett, Weatherford: From the reports that we have from the Bureau of Venereal Diseases, the venereal disease question is the biggest public health problem that we have to deal with in Texas today. Physicians, everywhere, should comply with the law in reporting all venereal cases to the proper authorities, and in using all legal measures to suppress them. There ought to be incorporated in our public laws a provision for employing capable and well-informed physicians to visit the public schools of our State and give proper lectures upon venereal diseases to the boys and girls who have reached sufficient age, probably those early in their teens, and warn them of the awful and dangerous results of living impure lives. In a few generations these lessons would be so deeply impressed upon the general public, that the parents themselves would have the moral courage to teach their children properly about these impure and injurious diseases. The public press should also be enlisted, as much as possible, to disseminate knowledge concerning this class of diseases.

Dr. Chas. Tarver, Eagle Pass: Our members seem to regard as unethical the reporting of a venereal case on a form that identifies the patient by name, residence, etc. A special difficulty in Eagle Pass lies in the fact that many infected persons treated by local doctors are citizens of Mexico, over whom we have no control. Our method of reporting venereal diseases does not appear to be quite satisfactory. Better results might be had under the Australian system, where the form covers the essential points but does not give the name of the patient. However, the venereal patient is required by law to follow a prescribed course, and the physician must warn him that on failure to do so, his name will be given the health authorities for action.

It is my belief that most progress can be made in our work through an educational campaign, correcting the dense general ignorance, even of well-informed people, concerning the actual status of modern hygienic science. To forward this important work, the widest possible publicity should be given the very valuable papers that have been read here by the heads of our Health Department.

The health officer is not adequately paid, because the true function of his office and its economic value is not sufficiently stressed. Ordinarily, the position is regarded merely as a side line to the practice of medicine, but the duties conflict and the office should carry enough salary to exclude the necessity of all work other than health conservation.

My first appointment, 16 years ago, was as county physician, and according to instructions, its duties were to treat paupers and prisoners and to take care of epidemics. Epidemics were quite common, especially smallpox, and I concluded that my labors would be lightened by striving to prevent rather than to treat them after their occurrence. Laboring under this conception, for the past ten years I have been doing almost exclusively health work, and the result apparently demonstrates that it is profitable to any community, as indicated by the reduced death rate, to pay a whole-time health officer.

I was urged to action along another line by a personal grievance. Being compelled to eat at restaurants for a time, I noted that customers ate with one hand while the other was kept busy shooing away flies. Having been crippled by a Colles' fracture, I got flies in my soup and determined to

make war on the nuisance. Note the results: In 1911, there were 55 deaths from epidemics and enteric (fly) disease, or 13.75 per 1,000 population. Had the same rate obtained in 1923, there would have been 116 deaths from these causes instead of 18, the actual number, a saving of 98 lives. Considering that the diseases prevented have a low mortality compared to the morbidity rate, say one to 20, the 98 deaths represent some 2,000 cases of illness. Taking into account the cost of medical bills, drugs and loss of time, the average case may be conservatively put at $10.00, an aggregate of $20,000. Estimating the cost of the health department at $10,000 per year, there is a clear annual saving of $10,000, and that in a city of 8,000 population. This improvement can be attributed mainly to the reduction in the number of flies through abating breeding places; the separating of the flies from excreta through better constructed privies, and the more general protection of homes by screening.

Next in importance has been stricter isolation of infected persons through better reporting of contagious diseases. The strict requiring of certificates for attendance at all schools, public and private, and persistent house to house vaccination has apparently eliminated smallpox. For 10 years, no two years passed without a more or less severe epidemic of smallpox, but for the past 6 years there has not been a case in the city.

It is probable that the progress noted has been made possible through continual health lectures to school children and a constant educational campaign in the daily paper.

Improved economic conditions was an undoubted factor in the better health of the Mexican people.

Dr. A. H. Flickwir, Houston: There certainly should be some regulation of stream pollution, especially of the inland water courses. There has been some difficulty regarding the pollution of the Houston Ship Channel or Buffalo River. This water course is affected by the tide, and for that reason there has been some contention as to whether it was under the jurisdiction of the State Board of Health or the Federal Government.

The plumbing and sewerage requirements for large cities are not always applicable to small towns, and in some cases would work a hardship upon them. In small towns it would be well to look into the different types of chemical toilets, many of which are on the market. Plans for the building of such toilets are also furnished by the State Board of Health.

The Sanitary Code regulations regarding water supply for railroads also have their weak points; for instance, the water may be obtained at the first run or division point from inspected tanks, but if a breakdown occurs and it becomes necessary to take on water before reaching the next division point, what means have we of knowing that the water obtained is certified?

Dr. J. H. Florence, Houston: Dr. Beazley's idea of a Board of Health who will, in their wisdom, select a health officer, is excellent. That the board shall be a revolving one, takes it out of politics entirely, and likewise the selection of a health officer. No criticism should be made of a chief executive that uses his appointing power to reward the faithful, for "politics is politics." The head of no department can expect efficiency and loyalty when his subordinates owe allegiance elsewhere. This situation can only be remedied by some such system as outlined in Dr. Beazley's paper.

Among other thorns in the political flesh are the salaries allowed. Our great State has the distinction of having had four Health Officers in three years. However, the meager remuneration is not altogether the real reason, as each knew the salary when he accepted the place. Then there must be other reasons. Our Vital Statistics Department is a joke—about 20 per cent of deaths and births are reported, hence the data gathered is practically worthless. The Pure Food Department cannot accomplish much, when two or three men are expected to inspect all the dairies, slaughter houses, markets and restaurants in Texas. They might cover one large county effectually! The three excellent chemists devote a large portion of their time analyzing home brew and corn whiskey, a duty forced on them, but for which the Legislature made no financial provision. I want it clearly understood I am in no way criticising the personnel of these or any other departments for non-performance of duty; on the contrary, they deserve credit for the showing made with the limited amount of money and the lack of laws.

More money is needed for the whole department, larger salaries would not attract any better men than we have had for several years, but their positions would be more permanent—hence they would have more incentive to enter into the work wholeheartedly. The State Health Officer must be given a free hand. Without undervaluing the financial help from outside agencies, namely, the Red Cross, the Rockefeller Fund and the Federal Government, I wish to say Texas is big enough and rich enough to take care of her own. Were it not for funds and aid from the above mentioned sources, the State Health Department would be badly crippled.

Let us get behind our legislators and senators and try to get results. Theoretically, we think we will, but practically, we will not.

When we have a perfect health department with funds ample to give service and make the department one to be proud of—then the millennium!

R. E. Tarbett, Sanitary Engineer, U. S. P. H. S., El Paso: Our streams must always be used as drains to carry away not only the surplus surface water, but also the domestic waste from our cities. They must also be used by many of our cities as sources of public water supply. Thus we have two uses for our streams which are diametrically opposed. It is therefore very necessary that the loading of the streams with pollution must not exceed that point where, through proper treatment, safe and satisfactory water supplies may be obtained. The determination of the extent of pollution of the streams, as well as the treatment of water for public water supplies, should be a function of the State Health Department, and adequate laws whereby this control may be exercised should be passed. At the present time the State Board of Health has (to a limited extent) some control over water supplies through the Interstate Quarantine Regulations. Under these regulations only water supplies conforming to the Treasury Department standards may be used by common carriers. The study of the supply upon which the certification is based is made by the State Health Department.

In the matter of legislation relative to mosquito control, the State of New Jersey has probably advanced further than any other state. In New Jersey the county desiring to carry on mosquito control work does so under a special tax, which tax is fixed by statute and the expenditure of the money is under a special commission, more or less independent of politics. In that State if a petition is presented to the county commissioners requesting that a study of mosquito control measures be made, such a petition must be acted upon and a commission appointed. If the report of that commission advocates that mosquito control work be undertaken and the report has the approval of their Department of Agriculture, then the county commissioners must

authorize the work and appoint a commission, without pay, under whom the work will be carried on.

In his paper, Dr. Garst touched upon the question of midwives and their relation to infant and maternal deaths. El Paso was perhaps cursed with more midwives per unit of population than any of the other cities in the State. In that city 50 per cent of all the births are attended by midwives, 40 per cent by the physician, and the remaining 10 per cent unattended. In 1922, there were 87 widwives operating, many of them old and decrepit—and many of them exceptionally filthy.

It being understood that there was no State law relative to the control of midwifery, the city passed an ordinance requiring the registration of midwives after an examination in which they could demonstrate their ability to properly carry on this work. This examination consisted of a physical and a mental examination, the latter being a written examination, in Spanish, given by one of the leading obstetricians in the city. This examination was not difficult and could be easily passed by any one qualified to carry on the practice of midwifery. Of the 87 midwives only 31 were able to pass the examination and be registered. It has been impressed upon the midwives that under no circumstances are they to practice medicine or surgery, and that in difficult cases they must call a physician to their assistance. Failure to follow these regulations would call for an annulment of their registration. Failure to report births promptly and failure to use prophylactic drops would also call for an annulment.

These midwives meet frequently with the supervising nurse, and their equipment is being constantly inspected.

The coöperation between the registered midwives and the Health Department is excellent, and we expect a material reduction in maternal and infant deaths, as well as in our stillbirths. Pending the passage of State legislation regulating the practice of midwifery, I see no reason why other municipalities cannot pass such regulations and control, to some degree at least, the practice of midwifery.

CONSERVATION OF PUBLIC HEALTH—A PROBLEM IN EDUCATION.*

BY

W. B. RUSS, Major, M. R. C.,
SAN ANTONIO, TEXAS.

The public health is a matter of vital importance to this and every other civilized country. A sound mind and a sound body is the ideal today as it was in the days of Greece and Rome. The conservation of the physical, mental and moral health of the people is a problem in education. Whatever may be said of those of us who are grown, it is the duty of the pulpit, the press, the schools and all other organizations and agencies dedicated to the service of our country, to work together for the upbuilding of the best possible physical, mental and moral fibre in the children who are soon to take our places. This work cannot be accomplished without co-operation of all the people, and co-operation cannot be secured except through education. The American Legion, trained by the lessons of the World War to understand the full meaning of physical, mental and moral fitness, is better qualified than is any other organization to co-operate with the medical profession in conducting such a campaign.

Civilization imposes new burdens upon the individual, which year by year become harder to bear. The constantly-increasing birth rate among the mentally and physically unfit, as compared with the constantly diminishing birth rate from the stock that is best able to bear the increased burdens of civilized life, tends to constantly lower the average level of physical and mental fitness. This means greater public health problems, which can be solved only by the education of all the people. The results of the physical and mental examination of the youth of this country, conducted under the selective service law administration, exphasize the appalling ignorance of the people with regard to health matters. Health surveys conducted for whatever purpose, serve but to emphasize the fact that some of the leading citizens of this country are, in matters pertaining to the public health, as ignorant as were the savages who roamed the plains of Texas when Columbus discovered America. Let us consider a few of the outward signs pointing to the dense and criminal ignorance of the people with reference to the public health. In the matter of breeding, the same biologic laws apply to human beings as apply to the lower animals. Every school child ought to know this simple fact, and yet the average citizen gives less serious consideration to the mating of his children than he does to the mating of his chickens, pigs and cattle. Bowing to false standards and blinded by ignorance of the simplest laws of nature, the average parent seems happy to mate his sons and daughters with the offspring of stock tainted with insanity, epilepsy or syphilis, and plainly stamped with the stigmata of physical and mental degeneracy; provided, of course, that the marriage will bring wealth or social distinction. In other words, the average parent seems willing for the sake of money or social position, to condemn his children to live their lives in idleness, which is in itself a cause of degeneracy, and perhaps to reproduce for the next generation children who, unfit to meet the competitions of life, are more apt to fill the insane asylums and jails and recruit the ranks of the bolsheviki than to uphold the traditions of America.

Overworked and underprivileged children are a menace to the communities in which they live, yet the regulation of the living and working conditions of the children of the poor is

*An address delivered before the American Legion, Department of Texas, at Galveston, Texas, August 29, 1923.

left by an ignorant public to be fought out between the laboring classes on the one hand and the employers of labor on the other. The physical, mental and moral condition of the children, is a matter of public concern and should be so treated; yet the health of the children in this country receives less care and attention from government agencies and from the public generally, than does the health of the live stock of the country.

The medical profession has been charged with neglecting the education of the public on health matters, and with having done but little to meet the antisocial and antihealth propaganda carried on by religious fanatics who make a business of treating the sick, by health fadists with something to sell, by quack doctors and patent medicine fakers with millions to spend for advertising, and by the great army of fakers who wish to practice medicine without meeting any sort of educational requirements. This charge is unjust. The medical profession has always been willing to take the leadership in public health education and to give full service as teachers, in return for the large sums of money that every state and every endowed medical college is spending to educate doctors, but it is the business of all the people and not of the medical profession alone, to consider the ways and means for combating disease and race degeneration.

I have said that in matters pertaining to public health, some of the leading citizens are as ignorant as were the savages who roamed the plains of Texas when Columbus discovered America. The savage did not have to face the problems that the civilized man has to face. He depended for the relief of his physical and mental ills upon the ministrations of the Indian medicine man, who chased away the devils of disease and worry by weird music, incantations, charms and amulets. This medicine man was a psychotherapist, who, in addition, possessed all the knowledge of preventive medicine necessary to meet the simple needs of his people. His people had reason to be satisfied with him, but what are we to say, for instance, of the educated and otherwise intelligent men and women of today, the leaders of public opinion, holding high positions in the pulpit and with the press, and with law making bodies, who are actually aiding and abetting cranks who seek to prevent vaccination against small-pox, notwithstanding the fact that an hour's reading of the history of small-pox would convince the dullest intellect that the only protection against the ravages of that dread disease is vaccination. For generations small-pox ravaged every part of the civilized world and claimed thousands of victims each year. At the time Jenner discovered vaccination there was scarcely an adult in England who did not bear the marks of the disease. The country was filled with blind, deaf and otherwise physically and mentally crippled victims of this scourge. When the disease first appeared in Greenland, seventy-five per cent of the people died in one year. Vaccination prevents small-pox, and when properly done, with properly prepared virus, has never yet injured a human being.

Within the memory of most of us, yellow fever was a constant menace to the health and the industrial prosperity of this country. With regularity it invaded our centers of population and destroyed thousands, besides ruining whole communities commercially. This disease, together with pernicious malaria, made the building of the Panama Canal impossible until it was found that the sole carrier of these infections is the mosquito, a special kind for each. Yellow fever and pernicious malaria disappeared as if by magic, with the control of the mosquito, and yet there are brilliant men and women wielding the pen in the sanctums of some of our leading newspapers, and leaders in all walks of life, who regard the whole theory of transmission of yellow fever and malaria by the mosquito as foolish and visionary.

Typhoid fever was an endemic disease and a constant menace to the health and happiness of the entire country until its cause, a microscopic organism, carried by flies and foodstuffs, was studied and vaccine prepared which could so increase resistance that our bodies would no longer serve as hosts for this particular disease-breeding germ. Thus ended the menace of typhoid fever, and yet there are thousands of men and women engaged in educational work in this country, and in teaching religion, who regard vaccination against typhoid fever as a cruel effort on the part of the medical profession to damage the health of the people.

Diphtheria, before the days of antitoxin, ravaged civilized communities with regularity, and killed and crippled many of the finest children. The mortality in some epidemics rose as high as sixty and eighty per cent. Some families lost every child. Today a death from diphtheria is unnecessary and is an evidence of neglect, yet there are publications circulated throughout the country which seek to prove that the use of diphtheria antitoxin poisons the blood of children, and is a conspiracy on the part of the doctors.

The hookworm, which has as definite a life history as has the pig, the chicken, fly or

ant, had produced such widespread physical, mental and moral degeneracy in sections of this country that entire communities had been ruined by its blight. The measures recently adopted for the diagnosis and control of hookworm have as if by magic reclaimed thousands of human wrecks and brought back health and prosperity to hundreds of communities, and yet the work of the hookworm commission in this country has received but little recognition at the hands of the public.

Every state in the Union is spending large sums of money to educate men and women concerning the causes, results, prevention and cure of disease. The courses of training by their length and rigor eliminate mentally and physically unfit applicants for license. To acquire the right to practice medicine, applicants must have had a high school and college education, four years of hard medical study and a term in post-graduate medical work. All of this is thought necessary to equip physicians for the work of diagnosing disease and advising the sick, and yet it is said that less than a year ago over sixty thousand of our good citizens petitioned our State Legislature and the Governor to permit the unrestricted practice of medicine by the disciples of a fad called chiropractic, which has filled this country with ignorant and incompetent persons without any sort of education, who teach that all diseases are caused by the pinching of spinal nerves between the vertebrae. Imagine sixty thousand people in the great commonwealth of Texas, in the year 1922, who would confer upon a horde of ignorant persons the unrestricted right to treat the sick by a mere trick, which they call adjustment of the spine. Imagine sixty thousand good citizens asking a Legislature to allow such practitioners the right to diagnose disease and to advise the sick—in short, to practice medicine—when they themselves state that they know of no causes that produce disease except pressure on spinal nerves, and that they know of no means of preventing or curing diseases except by manipulation of the spine with the bare hands. Think of trusting the lives of children to persons who believe that pneumonia, tonsillitis, influenza and other diseases that occur only in the winter months and automatically disappear in the spring, are caused by the pinching of spinal nerves, and that diseases of the intestinal tract that occur only on the warm months and automatically disappear in the winter months, are caused in the same way, and who believe that yellow fever, malaria, hookworm, small-pox, gonorrhea and cooties, can be prevented and cured by manipulation of the spine. Many barbers after six weeks training in chiropractic are now doctors of chiropractic, and yet if a nonbarber chiropractor should seek to become a barber, he would have to train three years in a barber shop. It requires ten or more years to make a doctor of medicine, three or more years to make a barber, or carpenter, or blacksmith, and but six weeks to make a chiropractor, and yet a large part of the press and the pulpit and many leaders in civil life, are backing these people in their demand for legal recognition and the right to determine their own educational standards.

The chiropractor is neither better nor worse than hundreds of his kind who continue to flourish in this country. His popularity merely emphasizes the need for public health education.

Much has been said about christian science and faith healing. Among the followers of Mrs. Eddy are many people of refinement, education and wealth, and many who are mentally unbalanced, neurotic and insane. Most of them are honest. Christian science is best known because of the theory that every disease, from typhoid fever to syphilis, is the result of a false belief, and can be prevented or cured by faith. The apostles of this religion teach that the great and important emotions, fear, pain, rage and hunger, are harmful and must be abolished. It has been known since the beginning of history that the abuse of any of the emotions will produce sickness and death, but a moment's thought would convince any intelligent person that these important protective emotions are given to us by a kind Providence for our protection, and that if they were abolished we would be as helpless as jellyfish. Imagine what would become of a group of individuals who had absolutely abolished *fear,* who were not restrained by fear from doing anything, or of permitting anything to be done to themselves. They would certainly be dangerous to themselves and to society. Imagine the disasters that would follow the loss of the warning received through the *pain* sense, or what the world would lose if no one could ever be aroused to violent action to meet great emergencies by the power of *rage,* or if mankind should be deprived of the *hunger* sense. Fortunately, christian scientists are mistaken in the belief that they are able to abolish the emotions of fear, rage, pain and hunger. This was well evidenced in a committee hearing during a session of the last State Legislature, where they, in defense of their right to practice medicine for hire, exhibited such a high degree of rage, and such great fear as to the outcome of their efforts, that even the un-

initiated could recognize the fact that they were still in possession of these protective emotions. If their demeanor meant anything, they still held to an abiding faith in their ability to inflict pain on the unregenerate heathen who opposed their efforts to mutilate the Medical Practice Act. In the violent conflicts which they have had from time to time in the management of their own church government, their leaders have always seemed to exhibit the emotion of rage.

It is a mistake to devote time and energy to abusing the patent medicine industry for exploiting an ignorant public, or the advertising fake doctor for promoting his dishonest business of terrifying the young and ignorant into believing that they are in need of his services, or the magnetic healer and other fakers who prey upon the public. It does no good to preach against the criminal graft practiced upon the poor and ignorant by the sale of fake gland products in drug stores at enormous prices, or to complain at the religious fanatics who would cast aside all the information with regard to the human body and its enemies, gained by ages of experience and by a knowledge of the allied sciences, such as psychology, biology, bacteriology, physics, chemistry, anatomy, physiology, etc. The remedy is not abuse of the fakers and fanatics, but education of all the people. Education of the young in the schools offers the best hope of a solution of the problem. When a school child sees with his own eyes through the magnifying glass of a microscope the behavior of living animal and vegetable organisms that prey upon man and upon the lower animals as well, it does not require an argument to make him understand that when the hookworm, or the tapeworm, attaches itself to any part of the anatomy, neither prayer or pressure on the spine will remove it. When a child is taught the elements of biology, the science of living things, and something of the structure and functions of the human body, he will never grow up to believe that all diseases can be cured by a mere trick, or that prayer is superior to vaccination in the prevention of small-pox, or the destruction of mosquitoes in the fight against malaria, nor will he be made to believe that the results of the breeding of the physically and mentally unfit can be cured by prayer, pills, adjusting the spine, or the laying on of hands.

You, men of the American Legion, representing the best of the young manhood of America, trained as no body of men ever were trained before to understand the full meaning of the sound mind in the sound body idea, should take the lead in creating a public sentiment that will result in the training of the children in the lower grades of both the public and private schools of the country, for leadership in the great work of conserving the public health.

MISCELLANEOUS

ONE RESULT OF HEALTH EDUCATION VIA THE PUBLIC PRESS.

A typhoid carrier has recently been discovered in a community as the direct result of a health item in a newspaper. A woman who read the article recalled that her mother-in-law had had typhoid fever in 1894, that from 1900 to 1904 she had kept a boarding house, and that four and probably more of the boarders contracted typhoid fever. During the past year three cases have occurred among her family or associates. When the daughter-in-law read a newspaper account of typhoid carriers, she suspected that her mother-in-law might be a carrier and consulted the local health officer:. From a fecal specimen obtained from the mother-in-law typhoid bacilli were isolated by the state laboratory.

This is the first instance which has come to the attention of the department where a layman has appealed to a health officer to ascertain whether or not a member of the family was a carrier.—*New York Health News Service.*

TOTAL OR SUBTOTAL HYSTERECTOMY?

To the Editor:—In an article in the TEXAS STATE JOURNAL OF MEDICINE, of April, 1924, Prof. Wm. T. Black, M. D., of the University of Tennessee College of Medicine, earnestly advocates incomplete hysterectomy because of the large difference in mortality which he claims exists between the total and the subtotal operations. According to this article the statistics from different operators in various hospitals show a death rate from total hysterectomy of 9.44 per cent, and from subtotal of 5.29 per cent. He concludes, therefore, that by doing the incomplete operation four lives out of every hundred will be saved, but he does not include the morbidity following the incomplete operation, nor the mortality from the development of cancer in the remaining cervix. He does not give the hospitals from which he gathers these statistics, nor the names of the operators.

A few years ago, at a meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, the question came up among a little group of us who were taking lunch together as to how we could best explain to a patient in plain language the danger of a hysterectomy. One of the number said that he was in the habit of telling a patient that the danger was just about the same as that of having a baby; and we all agreed that that was a very simple and truthful statement, but we certainly were not contemplating any such frightful mortality as given in Dr. Black's article.

In an article in the *British Medical Journal* (1924, vol. I, p. 1037), an abstract of which appears in the November, 1924, number of *Surgery, Gynecology and Obstetrics* (p. 397), Lockyer reports a series of 479 abdominal hysterectomies performed by himself, in which the supravaginal operation was done 284 times, with five deaths (a mortality of 1.76 per cent), and total hysterectomy 195 times with three deaths (a mortality of 1.54 per cent). Incidentally, he reports that serial sections of 900 uteri showed co-existing cancer in the stump in more than 2 per cent. He

greatly prefers the total operation, and his statistics would seem to confirm its advantages.

If the surgeons from whom Dr. Black quotes actually have a death rate for subtotal hysterectomy exactly three times that of Lockyer's, and for total hysterectomy more than six times his mortality, it would seem as though their cases should be presented to a grand jury and the operators indicted for manslaughter. A few years ago, when surgeons were making radical hysterectomies for cancer of the cervix, the immediate mortality was very large, although the number of ultimate cures was very satisfactory; but at the present time, practically all surgeons are treating such cases by radium and deep *x*-ray therapy, with results apparently much better but with final results still uncertain. Some such radical operations may have been included in Dr. Black's statistics, but his paper does not suggest it.

In the hands of a thoroughly competent operator, the death rate from abdominal panhysterectomy, when performed for fibroids, hyperplasia, or ordinary inflammatory conditions, should not exceed a fraction over 1 per cent, and the deaths which occur should be practically limited to those resulting from the unavoidable causes which were brought out years ago in a paper by the late Dr. Maurice Richardson. Deaths from shock or sepsis should be practically unknown.

The unavoidable conclusion is that the operators whose statistics form the basis of Dr. Black's article were thoroughly incompetent. It has been proposed that no one shall be permitted to pose as a surgeon, or as a specialist in any line of medical work, until he has passed a second examination before his State Board of Registration and has been found qualified to practice in the proposed specialty. In this way the profession can purge itself of incompetency, but unless this is done the public will soon become aware of the dangers to which they are exposed at the hands of incompetent men and will demand "State Medicine" as their only means of protection.

J. F. Baldwin, M. D., F. A. C. S.,
Columbus, Ohio.

To the Editor:—I wish to preface my remarks in answering Dr. Baldwin's criticism of my paper entitled, "Is Total Hysterectomy The Operation of Choice in Uterine Fibroids or Other Conditions Requiring a Hysterectomy?" by suggesting that the criticism is welcomed by me and that I was as much surprised as he seems to be upon finding out facts and figures upon the question, and am convinced that the favorable statistics which are given to the profession by men of great experience do not tell the whole story regarding the morbidity and mortality in hysterectomies. I believe if Dr. Baldwin will look up the mortality in hospitals where practically any physician who has a state license is permitted to operate, that he will be further surprised by finding out how high the mortality is and how much higher it is in a total than in a subtotal hysterectomy. I would have questioned the percentages, 9.44 in total hysterectomies and 5.29 in subtotal hysterectomies, like Dr. Baldwin has, because all available statistics (which have been given us by able men) are much lower. My own mortality rate in the last 235 cases was 2.6 per cent for subtotals and 6 per cent for totals, the latter being much higher than in the last series of cases, which is now 3 per cent. The high mortality rate in my own reported cases can be explained by the fact that two of the total hysterectomies were performed for far advanced carcinoma of the cervix (before radium was available), and other deaths occurred as described in the original article. The 9.44 per cent mortality by various operators was compared to the 1904 cases reported with a mortality of 4.9 per cent in total hysterectomies and the 1457 cases in subtotal hysterectomies with 3.3 per cent mortality, when the operation was performed by a skillful surgeon. This large percentage of mortality cases can be explained in a measure by very undesirable material to work upon, such as, the negro who only applies for operation as a last resort, and where radium was not available for cancer cases.

I believe that those who advocate and teach that a total hysterectomy should invariably be performed in all cases of fibroids requiring a hysterectomy, have forgotten how much safer they felt when commencing their surgical careers, in performing a subtotal instead of a total hysterectomy. I maintain that we, as teachers of gynecology, should teach that a subtotal hysterectomy is not as formidable or attended by as high a death rate as a total hysterectomy. I stated in the paper under discussion that I was performing total hysterectomy as the operation of choice in a larger number of cases than I did previously. This change in procedure has been brought about by better judgment in the selection of cases in which a total hysterectomy should be performed, and an improvement in surgical technic. I believe that in removing fibroids in a young woman with a normal cervix, a subtotal is the operation of choice.

In those approaching 50 years of age, when malignancy is so often found, in lacerated or diseased cervices, as well as other conditions which could be enumerated, a total hysterectomy is certainly the operation of choice. In patients that have rather large tumors, which are adherent, sometimes wedged in the pelvis, and frequently accompanied by adnexal disease (pus tubes, tubo-ovarian abscesses, etc.,) where the uterus is fixed by a subacute or chronic pelvic inflammation or where the pelvic diaphragm is board-like with extensive parametric involvement, a total hysterectomy is almost a physical and mechanical impossibility, and will cause quite an increase in the mortician's income tax. To teach in the face of some of the foregoing conditions that a total hysterectomy is as safe as a subtotal hysterectomy would be folly and, I think, criminal. The occurrence of cancer in the cervical stump must be considered, for probably 2 per cent will become cancerous, but the writer believes that if total hysterectomies are performed in suitable cases and when indicated as above stated, that the occurrence will be much less than 2 per cent.

The only statistics that my attention has been called to in which the mortality of the total hysterectomy operation is less than that of the subtotal, are those cited by Dr. Baldwin (Lockyer's). No doubt, any very experienced surgeon could have a mortality percentage less than 1 per cent if he could select his cases and refuse many that need operations. I believe that the only way to reduce the heavy mortality in either type of operation is to regulate and refuse certain physicians the privileges of the hospital (which is done in some of the Memphis hospitals and elsewhere), when they are known to be incompetent. Certainly a state license should not carry with it the privilege of performing hysterectomies, unless the operator has been found to be competent by some board or in some way—for certainly a hysterectomy of either variety is more dangerous than such a physiological function as "having a baby." I appreciate the remarks coming from a man of such splendid professional attainments as Dr. Baldwin, and his message is along exactly the lines which I tried to put forth in my paper. I believe, as Dr. Baldwin does, that there should not be such a discrepancy in statistics and that men should qualify themselves for this special line of work and keep the mortality down to less than 2 per cent, where it belongs. I was cognizant

of the criticism which the high mortality rates above cited might precipitate, but have given the figures as found. In deference to the experienced surgeons in the hospitals where data was obtained, I wish to state that their individual mortality rates are as low as those given by other equally qualified men from other parts of the country.

WM. T. BLACK, M. D., F. A. C. S.,
Memphis, Tennessee.

RAPID PROVISIONAL MICROSCOPIC DIAGNOSES OF MALIGNANCY, WITHOUT A MICROTOME.

In examining tissues stained with Polychrome Methylene Blue in the gross for malignancy, Benjamin Taylor Terry, Nashville, Tenn. (*Journal A. M. A.*, Oct. 11, 1924), came across a number of cases in which neither the naked eye examination nor the examination with a magnifying glass was sufficient for a diagnosis. It became very desirable to modify the method so as to permit an examination with the low power of the microscope. Experiments soon showed that this could be done. All that is necessary is proper technic, a smooth, clean cut slice of tissue that will lie flat, a good, quick-acting stain, a strong light concentrated to a small beam that illuminates evenly and obliquely the surface examined, and a good low power microscope. In order to secure a smooth slice of tissue that will lie flat, Terry uses a very sharp razor, and makes parallel cuts by drawing the razor through the tissue with a long, sweeping stroke. Both sides of each section can then be stained and examined. If the slices of tissue are large, the stain can be painted on the surface with a broad, soft camel's hair brush. If the sections are not large, they can be immersed directly in a small dish of stain. The moist, stained specimen, after a quick naked eye and low power examination, is placed at once in a shallow dish on the stage of a microscope so that the upper surface can be illuminated obliquely by a strong electric light concentrated to a beam from 2 to 3 mm. in diameter. This beam should fall on the surface of the tissue at an angle of about 45 degrees. Examination should be made at once, for strong light rapidly decolorizes the stained specimen. The new method has checked satisfactorily with the older methods in more than 80 per cent. of cases. The new method of staining in the gross and examining by oblique illumination has seven advantages: 1. It is very rapid. 2. It is seemingly dependable. 3. It is so simple that it probably can be easily and quickly acquired by any experienced pathologist. 4. Is is applicable to well fixed tissue, and it may be applicable also to fresh tissue. 5. It is inexpensive. 6. It is apparently especially useful in locating a small area of malignancy in a large area that is not malignant. 7. It is not restricted to the diagnosis of malignancy, for it shows other pathologic changes almost as well.

ACUTE APPENDICITIS IN CHILDREN.

One hundred and twenty-three cases of appendicitis occurring in children, from 1 to 15 years old, are analyzed by Richard W. Bolling, New York (*Journal A. M. A.*, Sept. 27, 1924). Abscess or contamination of the peritoneal cavity necessitated drainage of the peritoneum in 60 per cent. There was the usual variety of postoperative complications in about the same proportion as found in adults, the notable exception being the conspicuous absence of postoperative ileus. Two deaths gave a mortality of 2.5 per cent. In fifty-five cases followed for varying periods up to two years, there were three hernias, all in drained cases. No instance of intestinal obstruction occurred during the follow-up period. In children from 1 to 5, the mortality was just eight times what it was in older children. Over 90 per cent. of these patients were admitted with an abscess or a ruptured appendix with more or less widespread peritonitis. This condition of affairs is usually explained on the ground of the insidious onset; the rapid course of the disease, and the great tendency of the appendix to rupture in young children, together with their lack of resistance. The shortest history in Bolling's cases was twelve hours, and the longest fourteen days. In only four was the duration of symptoms before admission to the hospital less than two days, and all these children recovered. The average duration of symptoms before admission was four and a half days. In 90 per cent. of this series, the onset was characterized by definite abdominal pain. In three instances there was no evidence of pain, and the attack was initiated by persistent vomiting. In one other, vomiting persisted for some time before pain was complained of. There were four cases in which vomiting did not occur at all. Constipation is more frequent than diarrhea, but more or less normal bowel movements are more frequent than either. Probably there is always elevation of temperature at some stage. Occasionally, however, normal temperature is found when the child reaches the hospital. In three of Bolling's patients, the rectal temperature on admission was below 100° F. The range in this series was from 98 to 105° F.; the greater number being between 100 and 102.5° F. The leukocyte count varied widely, from 4,300 with a polyneucleosis of 64 per cent. in a 4-year-old child with a grossly ruptured appendix, an abscess and spreading peritonitis, to 42,000 with 95 per cent. polymorphonuclears in a child of 5 with a small, well localized abscess. Both children recovered. The temperature and the leukocyte count appear unrelated. Local tenderness is the most valuable of all signs. If corroborated by pain and vomiting with moderate elevation of temperature and leukocyte count, the diagnosis is reasonably sure. In differential diagnosis, many conditions must be taken into consideration, and a complete, careful physical examination is in every instance essential. There are no exceptions to the rule that appendicitis is a surgical disease in children. When a diagnosis has been made, operation should be carried out forthwith. No child with symptoms of abdominal disturbance should receive a cathartic until the possibility of appendicitis has been excluded.

DIPHTHERIA IN THE UNITED STATES.

Readers of *The Journal* are familiar with the survey of mortality from typhoid fever in the United States which has been published each year; today American cities are proud of their records in controlling mortality from this disease. In this issue is published a similar survey of the mortality from diphtheria in the large cities of the United States, grouped by geographic divisions. If our facts as to the cause of diphtheria, its prevention by the use of the Schick test and toxin-antitoxin, and its treatment by sufficient antitoxin given properly and early are correct —and they undoubtedly are—diphtheria is a preventable and controllable disease. It should have a low mortality wherever competent physicians are available.

There are, as will be seen from the figures published, marked differences both in the number of deaths from diphtheria in various communities and in the tendency of the mortality rate to increase or decrease. The highest diphtheria death rate in any American city is that of Fall River, which incidentally had the highest infant mortality rate among cities of its class during 1920. Only one city in New England has shown a continuous decline in diphtheria since

1890. While New York City has had a steady decline throughout thirty years, such cities as Rochester, Syracuse, Albany and Buffalo record a higher rate for the last four years than in the previous five-year period. Louisville and Nashville have experienced a progressive increase in diphtheria death rates since 1910. Omaha shows apparently no progress for twenty-five years, and Minneapolis far surpasses St. Paul in its attack on this disease. The diphtheria mortality rate is considerably lower in Southern cities, and this is believed to be definitely related to climatic advantages, since diphtheria is more likely to attack during periods of cold and rain.

The figures now made available are a challenge to every city in the United States which has a diphtheria mortality rate higher than the strikingly low rate of New York City. That community decreased from a rate of 134.4 in 1890-1894 to 85.8, and then gradually to 58, to 40, to 28, to 21.8 and for 1920-1923, to 14.5. This must be taken as an indication that the intensive campaign in the scientific control of diphtheria waged in that city has yielded substantial and encouraging results. That these results are not wholly fortuitous is shown by the fact that a continuous decline in mortality from this disease has also been shown by Hartford, Conn.; Jersey City; Philadelphia; Newark, N. J; Baltimore and Cincinnati.

The facts and the methods of control are available. It remains for the health officials and the physicians of cities which continue to have high death rates to show that similarly good results can be achieved by the intensive application of our scientific knowledge. —*Jour. A. M. A.*, Sept. 20, 1924.

TREATMENT OF PRURITUS.

Under thorough infiltration of the skin and subcutaneous tissue extending one-half inch beyond the area affected, with 0.5 per cent. quinin and urea hydrochlorid solution, itching is at once arrested; excoriations rapidly heal, and within a few days the skin resumes its normal smoothness and luster. Anesthesia, however, persists for from several days to as many weeks, and, at the expiration of this period, a second and sometimes a third infiltration is or may be required. It has not been necessary to employ a fourth infiltration in any case thus far treated, as the causative factor is searched for, and, if found, eliminated during the days of freedom from itching produced by this simple measure. Occasionally, one injection suffices and the patient remains away for months; but he finally returns to have skin tabs removed or other operative rectal procedures, which he has been told in the first instance would be needed to insure permanent relief, attended to.

The technic consists in rendering the part clean with water, a good soap and a soft sponge; application of a solution of mercurochrome-220 soluble as an antiseptic, and the injection of a small area with 1 per cent. procain as a starter. The remainder of the diseased skin is then infiltrated, after which the underlying subcutaneous structure is ballooned out with quinin and urea hydrochlorid solution until the patient complains, on resuming a chair, that he is "sitting on a cushion." The precautions to be observed are as follows:

1. A decided neurotic element exists in all pruritus cases; therefore it is wise to administer hypodermically one-fourth grain (0.01 gm.) of morphin before beginning this treatment, for the prevention of the shock; otherwise, profound depression, resembling greatly the first few hours succeeding a grave surgical operation, is likely to follow.

2. Not more than 10 c.c. of 1 per cent. procain should be used, but quinin and hydrochlorid solution from 0.25 to 0.5 per cent. strength may be used in any necessary quantity, as much as 200 or 300 c.c. (quinin and urea hydrochlorid solution in greater than 0.5 strength may produce a slough or an unpleasant induration).

Results in a number of cases have been as good as with a Ball or Lynch operation, and infinitely better than with the cautery.

The pressure on the terminal nerves produced by the forcible injection of fluid in large amount brings about a temporary paralysis equal in duration to that produced by severance of their filaments with a knife, and to the mind of the average patient is much more acceptable.—M. P. Moorer, M. D., *Jour. A. M. A.*, Sept. 6, 1924.

CARBON MONOXIDE POISONING IN SMALL GARAGES.

The newspapers recently carried a news item of the death from carbon monoxide poisoning, of a prominent Baltimore man, who was found dead in his garage with the engine of his automobile still running. With the onset of colder weather such accidents will probably increase in frequency, says the Surgeon General of the United States Public Health Service, who warns automobile owners of the danger involved in running a gasoline engine in a small closed space for any considerable period of time.

In tests of the exhaust of a small 23-horsepower automobile engine it has been found that it discharged approximately 25 cubic feet of gas per minute, samples of which gave an average of 6 per cent carbon monoxide, or 1.5 cubic feet of deadly carbon monoxide gas per minute. Of course larger engines will give off more. Now a ratio of 15 parts carbon monoxide to 10,000 parts of air is considered a dangerous concentration to be exposed to for a considerable time; and the small 23-horsepower engine in "warming up" and giving off only one cubic foot of carbon monoxide per minute would contaminate the air of a small closed garage, 10 by 10 by 20 feet, to the danger point in about three minutes.

Carbon monoxide is a colorless, tasteless, and almost odorless gas. Its poisonous action depends on the fact that it has a much greater affinity for the hemoglobin of the blood than has oxygen—hemoglobin attracting carbon monoxide about 300 times as strongly as it does oxygen. By combining with carbon monoxide, the hemoglobin of the red blood corpuscles is prevented from giving up its oxygen to the tissues. Death results from paralysis of the respiratory apparatus.

The attack of carbon monoxide poisoning comes on insidiously, and consciousness is gradually lost. Even though the victim may become aware of the danger he is often unable to escape from it because of the great loss of motor power. The automobile worker in a small garage is most frequently the victim. It therefore behooves every person who runs his engine in a small garage to see to it that the room is properly ventilated by having the windows and doors open if he expects to run the engine for even a few minutes.

—*U. S. Public Health Service Health News.*

RESOLUTIONS OF SYMPATHY.

With profound sorrow we note the death of our beloved friend and fellow member of the Board of Medical Examiners, Dr. S. L. Mayo, of Bishop, Texas.

In life Dr. Mayo exemplified the highest type of Christian gentleman with that of a conscientious, thoroughly qualified physician and surgeon, whose social and professional virtues won the confidence

and esteem of all who knew him and gained the admiration of all members of this board, with whom he was an active, willing worker and by whom he is now sadly missed; therefore, be it

Resolved, That the Texas State Board of Medical Examiners, in executive session this 18th day of November, suspend its official duties for a brief period in order that its members may pay an affectionate tribute of respect to the memory of a deceased associate whose sterling character, lofty ideals and wise counsel endeared him to his coworkers, who, with his many other sorrowing friends, humbly bow to the will of the Creator, "Who doeth all things well," and offer heartfelt sympathy to the wife and children of our departed brother in this hour of sorrow; be it further

Resolved, That this resolution shall be spread upon the minutes of this meeting and that a copy of it shall be sent to the bereaved family.

(Signed) JNO. T. MOORE, M. D.,
T. J. CROWE, M. D.,
Committee.

BUBONIC PLAGUE.

A Filipino laborer working in the Hamakua sugar mill is dead of bubonic plague in Hawaii. Three rats infected with the plague have been caught. How soon will our exalted civilization, which gladly spends millions to kill other human beings, spend the few necessary millions to get rid of rats and other disease spreading vermin? — *San Antonio Light.*

THE DANISH GOLD TREATMENT OF TUBERCULOSIS.

Hardly a year passes but that the announcement is made of some new method of treating tuberculosis. The hope that springs eternal in the breast of the consumptive is stimulated again, only to end in the apparently inevitable disappointment that has ensued so frequently. The most recent method to receive the sensational publicity duly accorded any venture in the treatment of tuberculosis is a preparation of gold, advanced in Denmark under the name "sanocrysin." As reported in the *Ugeskrift for Laeger*, meetings were held in Copenhagen, October 28 and 29, at which investigators of the new remedy gave their results to the Danish medical profession. Professor Moellgaard, the originator of the remedy, described its production, and stated that no reaction follows the introduction into the body of this remedy by the intravenous method, provided the tissues are healthy; but if they are tuberculous, a violent reaction ensues. It is assumed that the reaction is the result of release of material from tubercle bacilli that are destroyed by the remedy. The reaction is opposed by the injection of a specially prepared horse serum which, Moellgaard believes, already has greatly reduced the severity of the phenomena of the reaction. At the conference in Copenhagen, Moellgaard described the complete clinical recovery of two monkeys with severe tuberculous infection, following the use of his method. Several well known Danish clinicians reported brilliant results in the cases of many patients. However, there were several instances in which death had followed the administration of the remedy, presumably on account of difficulty in determining accurately the proper dosage. In discussing this work, the *British Medical Journal* points out that the most cautious of the speakers was Professor Moellgaard himself, and that he had been exceedingly reserved in his forecasts of the efficacy of "sanocrysin." In any event, it is also reported that Professor Moellgaard has asked the Medical Research Council of Great Britain to organize an investigation of the properties of the remedy. No doubt, information will become available in the near future which will indicate more adequately whether or not the drug has any real virtues in a condition in which heretofore all remedies heralded as specific have failed.—*Jour. A. M. A.*, Dec. 13, 1924.

A HELPFUL SIGN IN THE DIAGNOSIS OF APPENDICITIS.

The sign described by A. L. Soresi, New York (*Journal A. M. A.*, November 29, 1924), is said to be of value in diagnosing appendicitis. Briefly, one should not palpate the abdomen around McBurney's point. The patient flexes the thighs. The hand is applied to the region of the hepatic flexure of the colon. While the patient breathes as deeply as possible, the hand is pressed very gently under the costal margin. The patient is told to cough, and is then asked whether any pain is felt; the answer may be yes or no. When it is "yes," the patient, on being asked where the pain is felt, without hesitation will indicate McBurney's point when a true appendicitis is present. In acute cases the patient will spontaneously says: "It hurts me here," indicating McBurney's point. When the case is not one of appendicitis, the patient either does not report any pain or refers to pain felt in the region compressed by the hand or elsewhere, not to McBurney's point. This sign is elicited through gentle pressure on the appendical region by the gas contained in the intestine, when the patient coughs, while the hand of the surgeon compresses the colon, and by the pressure of the contracting abdominal muscles. However, in the sign described, two other important elements enter which make it most reliable. One element is the muscular contraction of the right rectus, which will cause pulling on its lower attachment, when the patient coughs, while the hand of the surgeon presses on its upper portion and holds it steady. The other element is a psychic one. The patient involuntary tells the truth.

FOREIGN BODIES OF DENTAL ORIGIN IN THE LUNGS.

The analysis of cases made by E. G. Gill, Roanoke, Va. (*Journal A. M. A.*, November 29, 1924), includes foreign bodies of the following types: teeth, dental burrs, gold crowns, dental plates, fillings, blade of forceps, plaster of Paris, hard rubber from dental mouth gag, disks of Allen's dental cement, and nerve canal reamers. In seventy-six of the 117 cases, teeth were the foreign bodies. The right bronchus is the favorite site of lodgment, the ratio being 2:1. The majority of accidents occurred while the patient was under an anesthetic. The most constant and definite symptom is a cough, which varies from an occasional one to one that is persistent and accompanied by profuse expectoration. In this series, sixty-four cases developed a cough as an early or a late symptom. The sojourn in the lungs of the foreign bodies presented in this series varied from four hours to thirteen years. In the case of thirteen years' duration, four false teeth on silver clamps were aspirated during a fit of coughing. Röentgen-ray examination was not made and bronchoscopy not attempted. The patient died. Of the 117 patients in the entire series, eighty-four recovered. The results were uncertain in nine, and there were twenty-four deaths. Fourteen patients died as the result of lung abscess, one following tracheotomy, three from symptoms simulating tuberculosis, one from bronchiectasis, one from pneumonectomy; in three cases, the cause of death was not stated. Of the eighty-four cases in which the patients recovered, the foreign body was removed bronchoscopically in thirty-eight instances; it was

coughed up in thirty-seven instances; it was removed by lower bronchoscopy through tracheal openings in five instances, and by successful tracheotomy in three, and one patient was relieved by artificial pneumothorax. Gill urges that in every operation about the mouth, care should be exercised to prevent aspiration infection. Symptoms in most cases are immediate; namely, cough, pain in chest and hemoptysis. Later symptoms may simulate pulmonary tuberculosis. Seven cases in this series were diagnosed as tuberculosis. Tuberculosis may coexist with lung abscess. Bronchoscopy is indicated in any case as a diagnostic measure if the history and röentgen-ray findings are not conclusive. When the presence of a foreign body has been definitely established, there is only one treatment—bronchoscopy. Expectant treatment is always hazardous, and lung abscess may develop at any time. Death is due in most instances to lung abscess, bronchiectasis and gangrene.

A PRACTICAL DANGER IN THE USE OF INSULIN BY THE PATIENT AT HOME.

When insulin was first introduced, Robert S. Berghoff, Chicago (*Journal A. M. A.*, Oct. 25, 1924), recalls, it was deemed advisable that its administration be begun with the patient under hospital supervision. When insulin therapy is prolonged indefinitely, its administration by the patient himself becomes necessary. We have felt safe in assuring our patients who possess urine sugar in appreciable amount that its entire absence on a given diet and set insulin dosage bespeaks a corresponding satisfactory blood sugar level, and calls for at least a temporary cessation of insulin therapy. In fact, we had almost accredited insulin with a gradual resumption of carbohydrate tolerance. However, at first sporadically, and of late, regularly, we have been impressed with the undeniable fact that after a more or less continued course of insulin the blood sugar threshold rises appreciably. This rise of the blood sugar threshold is of significant importance to the patient, robbing him of his only check, and lulling him into a sense of false security. If, for example, before the initial use of insulin, a patient's blood sugar threshold is determined at from 0.120 to 0.150, at which point sugar appears in the urine, it has been our common observation that the use of insulin soon raises those figures materially, in some instances more than 0.50 point. The practical significance is obvious. If patients are to be entrusted with the home use of insulin, a rough check on their status is essential. A daily blood sugar test is not practical. In the past, we relied on a daily urine sugar estimation to afford that information. In view of the recent gross discrepancies, however, between blood and urine sugar levels, that would seem unsatisfactory.

DIAGNOSTIC ERRORS LEADING TO UNCALLED FOR APPENDECTOMY.

Henry Ward Bettman, Cincinnati (*Journal A. M. A*, Oct. 18, 1924), collected from private practice reports of some 300 cases in which appendectomies had been performed without relief. Patients could not always furnish accurate histories. Every case in which the history was uncertain or inconclusive was rejected. This rigorous censorship left only 170 cases for statistical presentation, although fifty other cases had features of practical importance. A careful analysis of the 170 cases led to the rather startling conclusion that fully two-thirds of all the patients had never been carefully studied before the operation, and the indications for any operation in at least one-third of the cases were very imperfect indeed. Not one-third of the patients had had a competent and thorough examination in the modern sense. Not that large a proportion had had an analysis of the gastric juice, any adequate observation under proper dietetic conditions or a complete roentgen-ray examination. Many were subjected to operation "on suspicion" because their digestive disturbances had resisted medical treatment and because many of them presented right iliac sensitiveness, gaseous distention or other signs or symptoms that seemed to point to the possibly of chronic appendicitis. In more than one-third of the cases the indications for an operation were quite insufficient. Of the 300 patients, thirty-five complained of serious disorders traceable to the operation itself. The commonest sequels were hernia, ileac stasis, omental and other adhesions, and neurasthenia.

THE MENACE OF QUACK DOCTORS.

"There is no greater menace to the public health than the quack doctor. It is regrettable that the penalty for practicing medicine without a license is not more severe. It is an anomaly that one who steals property is guilty of larceny, for which offense a severe penalty is imposed, while one who robs a person of his health, the most sacred thing in his possession, is guilty only of a misdemeanor." (From an article by Deputy Assistant District Attorney Michael A. Ford, in "*The New York Medical Week*," October 4, 1924.)

—*Health News* (New York.)

INCREASE IN PRICE OF SPECIAL JOURNALS.

Because of the increase in cost of printing and materials embodied in the publication of the special journals issued by the American Medical Association, and because it is desired to enhance still further the quality and scope of these publications, the Board of Trustees has established increases in the prices of the following periodicals:

Archives of Neurology and Psychiatry, from	$6 to $8
Archives of Dermatology and Syphilology, from	6 to 8
Archives of Surgery, from	6 to 8
Quarterly Cumulative Index, from	6 to 8

—*Jour. A. M. A.*, Nov. 29, 1924.

ANNUAL CONFERENCE OF ASSOCIATION SECRETARIES.

The regular Annual Conference of Secretaries of Constituent State Medical Associations was held in Chicago in the building of the American Medical Association, November 21-22. Thirty-seven secretaries of state associations were in attendance in addition to executive secretaries from four states. The editors of twelve state medical journals who are not secretaries were also present at the conference, which was attended by the general officers and Board of Trustees of the Association. The proceedings of this conference will be published in the *American Medical Association Bulletin*, beginning with the December number.—*Jour. A. M. A.*, Nov. 29, 1294.

CHLORIN IN RESPIRATORY DISEASES

When the announcement first appeared in *The Journal*, last March, that Vedder and Sawyer of the Army Medical Corps had been able to devise a method for administering chlorin, in the treatment of respiratory diseases, which seemed to have a distinctly beneficial effect in this class of ailments, it was received with exceptional interest. This interest was stimulated, no doubt by the fact that high officials of our government, including even the President of the United States, had submitted to treatment by this method and had expressed satisfaction with the results. Immediately, individual physicians, as well as hospitals and health departments, undertook to test chlorin administration

on a large scale, with a view to establishing finally its actual adequacy. In New York City, Health Commissioner Monaghan established two clinics under the direction of Dr. L. I. Harris, in charge of the Bureau of Preventable Diseases. These clinics began active work, June 1, and continued until August 1. The results of the experiment have just been made available through the health bulletin of the Department of Health of the City of New York. According to the report, only 6.5 per cent. of 506 persons with various respiratory diseases reported themselves as cured, in contrast to 71.4 per cent. of 931 patients reported cured in the original paper of Drs. Vedder and Sawyer. Fifty-three per cent. of the patients treated by the New York clinics reported improvement, but the physicians in charge do not attach much importance to such reports, since it is well known that patients with minor respiratory infections tend to improve, within certain limitations, by the very nature of such diseases. As is mentioned, the report of the New York investigators concerns only acute cases, and the conclusion is that in such instances at least the claims are unjustified. Much has been said of the use of the method in whooping cough, but eighteen cases of this disease studied with twelve controls failed to show any appreciable advantage of the chlorin method of treatment over that previously used. The method was without apparent benefit in asthma and in hayfever; indeed, three patients with asthma became decidedly worse under treatment. The results of this controlled investigation are, therefore, such as to deprecate definitely the claims originally made for the method by the Army medical investigators. The physician is confronted with a situation in which the original investigators, whose work seems to have been conducted in a scientific manner, report excellent results which other investigators working independently have failed to confirm. Obviously, the results of numerous investigations being made elsewhere must also be brought to light before any opinion is warranted as to the future of this method of treating disease. Certainly the individual physician who purchases such apparatus and uses it in his practice must do so with the distinct understanding that he is using an unestablished method.—*Jour. A. M. A.*, Dec. 6, 1924.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

Schick Test-Lederle (New and Nonofficial Remedies, 1924, p. 335).—A diphtheria immunity test, also marketed in packages of one vial containing diphtheria toxin sufficient for 50 tests; in packages of one vial containing diphtheria toxin sufficient for 100 tests. Lederle Antitoxin Laboratories, New York.

Antidysenteric Serum-P. D. and Co. (New and Nonofficial Remedies, 1924, p. 301).—An antidysenteric serum, also marketed in packages of one syringe containing 20 cc. Parke Davis and Co., Detroit.

Quinine Ethyl Carbonate-P. W. R.—A brand of quinine ethyl carbonate-N. N. R. (see New and Nonofficial Remedies, 1924, p. 267). Powers-Weightman-Rosengarten Co., Philadelphia.—*Jour. A. M. A.*, Nov. 22, 1924.

Barbital Sodium-Merck.—A brand of barbital sodium-N. N. R. (New and Nonofficial Remedies, 1924, p. 63). Merck and Co., New York.

Cargentos Ointment, 5 Per Cent.—An ointment composed of cargentos (formerly marketed as cargentos new process, New and Nonofficial Remedies, 1924, p. 343), 1 part; anhydrous woolfat 19 parts. The H. K. Mulford Co., Philadelphia.

Diphtheria Toxin-Antitoxin Mixture New Formula (Park Banzhaf's, 0.1 L+ Dose.)—A diphtheria toxin-antitoxin mixtures (New and Nonofficial Remedies, 1924, p. 298), each cc. of which constitutes a single dose, and contains 0.1 lethal dose of toxin properly neutralized with the necessary amount of diphtheria antitoxin; marketed in packages of three 1 cc. vials representing one immunizing dose; in packages of thirty 1 cc. vials representing ten treatments; also in packages of one 30 cc. vial representing three treatments of three doses each. The H. K. Mulford Co., Philadelphia.—*Jour. A. M. A.*, Nov. 1, 1924.

Nutrivoid Flour.—A vegetable product composed chiefly of unassimilable carbohydrates (mannans). It contains fat, 0.92 per cent.; protein, 4.31 per cent.; nonutilizable carbohydrates, 85.37 per cent. Nutrivoid flour is used as a means of filling out restricted diets, as in the Allen treatment of diabetes. It is a non-nutritive food substance used to give bulk to foods, thus serving to satisfy hunger without furnishing nourishment. Nutrivoid Diabetic Flour Co., New York.

Lacto-Dextrin.—A mixture composed of lactose, 73 per cent.; dextrin, 25 per cent, and desiccated lemon juice 2 per cent. The administration of lacto-dextrin is proposed as a means of promoting the growth of the normally present aciduric organisms B. acidophilus and B. bifidus in the alimentary tract, so as to make them the predominating organisms. It is claimed that this increased growth of acidophile organisms prevents the undue development of putrifactive bacteria and their products. It is claimed that this change in the character of the intestinal flora brings about increased intestinal activity and that this in turn prevents or ameliorates certain conditions commonly ascribed to putrifactive products in the colon. Battle Creek Food Co., Battle Creek, Mich.

Pituitary Extract-Lilly (Obstetrical).—A slightly acid aqueous solution containing the water soluble principle or principles of the fresh posterior lobe of the pituitary body of cattle. It is tested for oxytocic action on the isolated uterus of the virgin guinea-pig against a standard solution prepared from defatted desiccated posterior lobe powder and adjusted so that its strength is equal to that of a 5 per cent. solution of the fresh posterior lobe of the pituitary gland. For a discussion of the actions and uses, see general article, Pituitary Gland, New and Nonofficial Remedies, 1924, p. 225. Pituitary extract-Lilly (obstetrical) is marketed in ampules containing 0.5 cc. and 1 cc., respectively. Eli Lilly and Co., Indianapolis.

Cargentos Capsules, 3 Grains.—Capsules, each containing cargentos (formerly marketed as cargentos new process, (New and Nonofficial Remedies, 1924, p. 343), 3 grains. The H. K. Mulford Co., Philadelphia.

Culture Bacillus Acidophilus-Medical Laboratories, Inc. A broth culture of *Bacillus* acidophilus in bottles containing about 120 cc. It contains from 250 to 500 million of viable organisms (*B. acidophilus*) per cc. at the time of sale. For a discussion of the actions and uses, see Lactic Acid-Producing Organisms and preparations (New and Nonofficial Remedies, 1924, p. 169). Medical Laboratories, Inc., New York.—*Jour. A. M. A.*, Nov. 15, 1924.

Pituitary Extract-Lilly (Surgical).—A slightly acid aqueous solution containing the water soluble principle or principles of the fresh posterior lobe of the pituitary body of cattle. It is tested for its pressor action on the blood pressure of mammals and for oxytocic action on the isolated uterus of the virgin guinea-pig against a standard solution prepared from

defatted, desiccated posterior lobe powder and adjusted so that its strength is equivalent to that of a 10 per cent. solution of the fresh posterior portion of the pituitary gland. For a discussion of the actions and uses, see general article, Pituitary Gland, New and Nonofficial Remedies, 1924, p. 225. Pituitary extract-Lilly (surgical) is marketed in ampules containing 1 cc. Eli Lilly and Co., Indianapolis.

Intarvin.—An artificial fat made from fatty acids having an odd number of carbon atoms. Intarvin is composed of the glyceryl esters of margaric acid admixed with small quantities of the glyceryl esters of pentadecylic, palmitic and stearic acids, 82 per cent.; liquid petrolatum, 12 per cent.; water, 6 per cent. Intarvin is proposed for use in diabetes mellitus on the ground that fatty acids containing an odd number of carbon atoms do not yield ketone bodies on oxidation in the normal or diabetic organism, and that for this reason it may with advantage replace the natural fats in the diet. The evidence indicates that intarvin does not increase the production and may reduce the production of ketones in certain cases; that it has a protein sparing-action; that sugar is formed from it in small amounts only; that it has little if any beneficial effects on carbohydrate metabolism in the human organism; that its unpalatable taste is a drawback to its use, and that it may prove useful in the treatment of diabetes in certain cases. Intarvin Co., Inc., Long Island City, N. Y.

Secacornin-Ergotin-Roche.—A solution of the active principles of ergot in a menstruum consisting of distilled water, glycerin and 7.5 per cent. of alcohol. One cubic centimeter secacornin corresponds to 4 Gm. ergot, U. S. P. The actions and uses of secacornin are the same as those of ergot. It may be given by intramuscular injection. Hoffman-LaRoche Chemical Works, New York.—*Jour. A. M. A.*, Nov. 29, 1924.

PROPAGANDA FOR REFORM.

Why Tucker's Asthma Specific?—For some years there has been put out from Mount Gilead, Ohio, a nostrum known as "Tucker's Asthma Specific." The nostrum, which is sold on the mail order plan, declares on the label the presence of 5 grains of cocain to the fluidounce. It has been analyzed at various times and substantial amounts of cocain have been found. A case of cocain poisoning from the preparation has been reported. The nostrum has been declared unsalable in the State of Massachusetts because of its cocain content. In 1910, the U. S. Department of Agriculture issued a bulletin of "Habit-Forming Agents" in which a warning against the Tucker preparation was included. To learn how the Tucker concern can send out a cocain-containing mixture without violating the Harrison Narcotic Law, an inquiry was sent to Washington. The Commissioner of Internal Revenue replied that, while Tucker's Asthma Specific carried a label admitting the presence of cocain, the facts were that before the remedy reached the public, the cocain became hydrolyzed and there was either no cocain or but an infinitesimal quantity. The Commissioner also declared that the mail-order distribution served "a great humanitarian cause" and, therefore, it had been decided by the Treasury Department to take no action enjoining its distribution. Further correspondence brought the statement that samples of the Tucker remedy taken on the market, when analyzed, showed either no cocain as such, or not to exceed one-half grain to the fluidounce. Even if one admits the "humanitarian" motives of the exploiters of this "quack medicine" and the various other claims made by the Treasury Department, the fact still remains that the sale of the Tucker remedy seems to be an obvious violation of one or two federal laws. If it contains no cocain, then it is misbranded. If it contains cocain or a derivative of cocain, then its sale violates the Harrison Narcotic Law.—*Jour. A. M. A.*, Nov. 1, 1924.

B. Paul's Henna and Liquid Hair Dyes.—Two hair dyes are put out by one Paul Balme, who does business in New York City under the name "B. Paul." One of these dyes is known today as "Paul's Henna" and is a powdered mixture. The other, put out by the same man, is called "B. Paul's Liquid Mixture." B. Paul's Henna comes in a tin can and is claimed to be " * * * a powdered preparation composed of pulverized henna and herbs which will color gray hair to any one of our fourteen different shades." Accompanying this powder is a small envelop containing a white powder and labeled "B. Paul's Developer: to set the shade." For use, the hair must be washed, the powder applied in the form of a thick paste and left on for from thirty minutes to two hours; the hair is then rinsed and treated with a solution of the "developer." The A. M. A. Chemical Laboratory reports that the "henna" powder consists essentially of dried plant leaves, pyrogallol, iron and copper compounds, and that the "developer" is sodium perborate. The Laboratory also examined the the liquid preparation. The preparation was contained in two bottles: one was essentially a solution of the well-known copper ammonium sulphate, the other was a solution of pyrogallol.—*Jour. A. M. A.*, Nov. 1, 1924.

Aolan Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that Aolan is prepared from milk freed from fat and is claimed to be a germ-free and toxin-free solution of lactalbumen, manufactured in Germany for the H. A. Metz Laboratories, Inc. The use of Aolan is recommended by intramuscular and intravenous injection in a large number of conditions. The Council found Aolan inadmissible to New and Nonofficial Remedies because it is marketed under unwarranted therapeutic claims. When the Metz Laboratories was informed of the Council's decision, the firm sent a detailed reply. After considering this reply, the Council decided that the rejection of Aolan should stand. The Metz Laboratories, Inc., does not hold itself responsible for the many and varied claims made for nonspecific protein therapy and the uses of Aolan in connection therewith which have appeared in print. Although the claims advanced by the American agent are relatively moderate, they are still unacceptable because they are unsupported by controlled clinical evidence from reputable observers.—*Jour. A. M. A.*, Nov. 8, 1924.

Hexamethylenamin.—Like the earlier attempts to "disinfect" the alimentary tract through ingestion of selective germicidal substances, the efforts to render the entire organism free from micro-organism by a similar therapeutic procedure have not been attended by conspicuous success. Hexamethylenamin was early hailed as promising success in these endeavors. It has been recommended as an antiseptic agent for virtually all the body fluids. It was soon demonstrated, however, that bacterial growth is not prevented by it, even in proportions much higher than could be found anywhere in the body. This important evidence rendered it improbable that the administration of hexamethylenamin can exert marked antiseptic effects in the tissues. In an acid solution hexamethylenamin disintegrates into ammonia and formaldehyd, and to the latter substance are doubtless due the beneficial therapeutic results experienced in the treatment of urinary infection. A recent study demonstrates that the alleged beneficial effects of hexamelthylenamin systemically in various infectious diseases cannot be explained by the presence of adequate liberation of formaldehyd in the circulation and tissues. The drug itself is not antiseptic; and

the hope of securing systemic antisepsis through its use seems forlorn. Its one field of action seems to be in pathologic conditions in the urinary tract, and it is necessary that the urine be markedly acid.—*Jour. A. M. A.*, Nov. 22, 1924.

Pollantin Not Accepted for N. N. R.—Pollantin Liquid, Pollantin Ointment and Pollantin Powder are hay-fever "remedies," manufactured in Germany and marketed in this country by Fritzsche Bros., Inc., New York. According to the advertising, it is prepared from the serum of horses inoculated with "the pollens of various species of ragweed and goldenrod, and of graminae, such as rye, Indian corn, meadow foxtail, timothy grass, etc.," and is suitable for all forms of hay-fever. An enormous amount of work has been published controverting the claimed value of this serum. The principle on which Pollantin was founded has been found to be unsound, and there is no acceptable evidence to show that hay-fever is due to a toxin in pollen. The Council on Pharmacy and Chemistry found Pollantin Liquid, Pollantin Ointment and Pollantin Powder inadmissible to New and Nonofficial Remedies because the claims for their value are unfounded and they appear to be unscientific and useless articles.—*Jour. A. M. A.*, Nov. 8, 1924.

San-Gri-Na.—"San-Gri-Na is the formula of a French physician. It has been used in Europe by millionaires, actresses and hundreds of fat men and women because it is simple, easy, pleasant and harmless." Thus runs part of the advertising claptrap for San-Gri-Na, one of the recent entrants to the "obesity cure" field. The preparation is put out by the "Scientific Research Laboratories," New York City. The newspaper advertisements convey to the obese public the idea that it is unnecessary to exercise or diet, the only desideratum being the purchase of San-Gri-Na. When the stuff has been bought, however, the purchaser finds that in addition to San-Gri-Na she should take the juice of one lemon in a glass of warm water every morning, chew her food very thoroughly, eat only two or three light meals a day, sleep not more than six or seven hours, do a reasonable amount of walking, take no liquid with meals, avoid starches, fat and candy. From the analysis of San-Gri-Na in the A. M. A. Chemical Laboratory, it appears that the product consists of tablets containing sulphur and cream of tartar with a small quantity of phenolphthalein as their essential constituents.—*Jour. A. M. A.*, Nov. 22, 1924.

Pixalbol Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that Pixalbol is the name under which E. Bilhuber, Inc., New York, markets a colorless tar preparation which is manufactured by Knoll and Co., Ludwigshafen a. Rh., Germany. It is claimed to be identical with the preparation formerly sold in the United States by Knoll and Co. as Anthrasol. The trademark on the word "Anthrasol" was seized by the U. S. Government during the late war and sold to the Chemical Foundation, Inc. The product may be marketed in the United States under the name Anthrasol, only with the consent of the holders of the rights to the trademark. In consideration of the abuses which are connected with the application of proprietary names to medicinal articles, the Council recognizes such names only when this is in the interest of the public welfare. Since the product in question was introduced under the name Anthrasol, the Council decided that it was not in the interest of medicine that further proprietary names be applied to it. The Council informed E. Bilhuber, Inc., that consideration will be given the product if it is marketed as Anthrasol under license from the Chemical Foundation, Inc., or under a satisfactory descriptive nonexclusive name.—*Jour. A. M. A.*, Nov. 22, 1924.

Painodynes.—According to the label on the bottle, Painodynes, sold by the Wm. A. Webster Co., Memphis, Tenn., consists of "An organic compound containing Neurodyne 5 grains, Theine Citrated ½ grain combined with triple bromides ½ grain." The firm states that Neurodyne is "Ortho Hydroxybenzoic Acetic Acid Ester" and that the compound used is of the highest degree of purity. "Ortho Hydroxybenzoic Acetic Acid Ester" is a ridiculously long drawn out name for acetylsalicylic acid. Tests made in the A. M. A. Chemical Laboratory indicated the presence of this substance in Painodynes; the tests did not confirm the claim that the product used was of the highest purity. Furthermore, the Laboratory was unable to find any citrate, although "Theine citrated" is declared. These discrepancies are not surprising, as the firm has pleaded guilty a number of times to the charge of adulteration and misbranding. Painodynes belongs to the class of irrational shotgun mixtures marketed with unwarranted claims.—*Jour. A. M. A.*, Nov. 22, 1924.

Peptone Solution for Hypodermatic Use (Armour) Not Accepted for N. N. R.—Peptone solution for hypodermatic use is marketed by Armour and Company in ampules containing 1 cc. of a 5 per cent. solution of Armour's Special Beef Peptone. The product is advertised "as an aid in immunization, hypodermatically and orally" and the advertising refers in the main to the firm's peptone solution for hypodermatic injection, although its intravenous use is also dealt with. Emphasis is given to the use of peptone in the treatment of asthma. Reference is also made to its use in such conditions as hay-fever, skin affections associated with asthma, cyclic gastrointestinal attacks, urticaria, coryza of the spasmodic type, migraine angioneurotic edema and pruritus. Intravenous medication—some wise and some foolish—has greatly increased in recent years, and it is not surprising that foreign proteins should be used in the hope of accomplishing something in conditions such as those for which the Armour preparation is advertised. It is a serious question whether the best interests of medicine are served by the recognition of methods, the real value of which is not established, the limitations and dangers of which are not understood, and the general employment of which contributes to the profits of those who sell the product, rather than to a knowledge of the actual value of the product. For this reason, the Council on Pharmacy and Chemistry voted not to accept Peptone Solution for Hypodermatic Use (Armour) because it is an unstandardized mixture, and because its acceptance would be taken as an endorsement of the use of peptone for intravenous use, presumably for all the conditions in which its employment has been recorded. The Council wishes it understood that, in not accepting this preparation, it has no intention of opposing the legitimate use of protein preparations by those who wish to study nonspecific protein therapy. The Council reports that Armour and Company appeared willing to undertake the standardization of the protein, but that the rejection of the preparation was affirmed because its value has not been established.—*Jour. A. M. A.*, Nov. 29, 1924.

Lavex.—Lavex, of the Lavex Chemical Company, Kansas City, Mo., appears to be a new name for what used to be called "Maignen Antiseptic Powder," put out some ten years ago by the "Maignen Institute for the Study of Bacterial Diseases" of Philadelphia. At that time, it was claimed to be a mixture of calcium hydroxid, sodium carbonate, aluminum sulphate and boric acid. The Council on Pharmacy and Chemistry reported on Maignen Antiseptic Powder in 1914. In 1915, the government declared Maignen Antiseptic Powder misbranded.—*Jour. A. M. A.*, Nov. 29, 1924.

NEWS

Harris Sanitarium Annex.—The new $250,000 addition to Harris Sanitarium, at Fifth Avenue and Cannon Streets, Fort Worth, is completed with the exception of interior finishing, and will be ready for occupancy by January 1, according to officials of the hospital. The annex contains fifty rooms and when it is completed, the sanitarium will have 100 rooms. —*Fort Worth Record.*

Military Surgeons' Association and Air Service Medical Association held a joint annual meeting at San Antonio, at which the armies of six different nations besides the United States were represented. These nations were England, France, Japan, Porto Rico, Czecho Slovakia and Venezuela. In addition to these distinguished foreign guests, there were 100 surgeons from the United States Army in attendance.

Santa Fe Hospital Enlarged.—An addition to the Santa Fe Railway Employes' Association Hospital at Temple, to cost $125,000 or more, has been decided upon by the board of trustees. The annex will adjoin the main building on the south, and when completed will finish the original design for the building. After this addition is made the hospital will have more than 200 beds. Plans and specifications will be drawn and approved so that construction may start at an early date.—*Dallas News.*

Eye Clinic Planned by Johns Hopkins.—Trustees of Johns Hopkins Institutions have joined the Wilmer Foundation in a campaign to establish, in the next 40 days, a $3,000,000 fund for the endowment, at Baltimore, of an eye hospital and school, which it is announced would be the first of its kind in America, and the equal of any in the world.

The plan is for an institution for the study and treatment of diseases of the eye, for research into causes of blindness and kindred ailments, and for the education of American specialists who heretofore have attended European universities and clinics to perfect themselves for the practice of ophthalmology. —*San Antonio Light.*

Medical Corps of U. S. Veterans' Bureau.—Legislation to permit formation of a medical corps of the 1,490 physicians and dentists employed by the Veterans' Bureau, and to raise the rate of pay for all medical personnel, was urged by the Bureau's medical council in session here. It was pointed out that unless the Bureau is able to offer better remuneration it would not be possible to attract the type of men it needs.

The council also recommended broadening the authority of the Bureau's medical director and authorizing the appointment of at least five assistants to aid him in the five regional areas recently created under the Bureau's decentralization system. —*Dallas News.*

Adult Vaccinated in Childhood Contracts Smallpox.—A fourth case of smallpox has just been reported from Elmira, New York. The victim is a clergyman who, in order to administer the last rites of the church, visited a woman who was dying from the disease. He had been vaccinated in childhood, showed a good vaccination scar, and apparently regarded himself as fully protected by the old vaccination. He is said to have a moderate and discrete type of smallpox. The health officer had taken for granted that he had recently been vaccinated. Dr. Conway, district state health officer, states that this is the second instance he has encountered of a clergyman becoming infected under such circumstances. Health officers should make sure that all persons who are obliged to come in contact with a smallpox case in the line of duty, are vaccinated at the time and kept under observation.—*Health News* (New York).

Dr. Preston Resigns.—Resignation of Superintendent of the State Insane Asylum at Austin, Dr. John Preston, to become effective Jan. 15, was announced by the State Board of Control on December 9.

Dr. Preston in his letter of resignation stated that he resigned on account of "infirmities of age and failing health."

The Board, in this connection, announced that Dr. J. G. Springer, now superintendent of the Southwestern Insane Asylum at San Antonio, would be transferred to the Austin asylum, and Dr. Charles W. Castner, Rusk, would be transferred to the San Antonio institution, and that Dr. W. J. Johnson, now superintendent of the hospital for the senile insane, has been tendered the position of superintendent of the institution at Rusk.—*Fort Worth Star-Telegram.*

Health Articles for Texas Outlook.—The State Medical Association of Texas is preparing a series of twelve illustrated articles to be published by the Texas State Teachers' Association, starting in September. Dr. M. F. Bledsoe, the president, and Dr. Holman Taylor, secretary, of the Medical Association, have arranged to have the articles written, and Secretary R. T. Ellis of the teachers' organization has planned for their distribution to the schools of the state.

Making Texas children healthy is the aim of the two associations, and it is thought that the direct appeal through the school room will be especially effective. As arranged, the articles will deal with both seasonal and other diseases, as well as with problems of eating and exercise.—*Lancaster (Texas) Herald.*

Tryparsamide Soon to Become Available.—The Rockefeller Institute for Medical Research has announced the release of the drug known as tryparsamide for use in the treatment of human and animal trypanosomiasis (African sleeping sickness and *mal de caderas*) and selected cases of syphilis of the central nervous system. This action is based on results reported from clinical investigations which have been in progress for several years. The drug will be manufactured by the Powers-Weightman-Rosengarten Co. of Philadelphia, and will become available through the regular trade channels about January 1, 1925. In releasing the drug for the benefit of the public, the Rockefeller Institute desires it to be known that the Institute does not share in any way in profits that may be derived from the sale of the drug and that, with the cordial coöperation of the manufacturers, provision has been made for the maintenance of a schedule of prices on as low a basis as possible.—*Rockefeller Institute News Item.*

The American Board of Otolaryngology.—The American Board of Otolaryngology was organized in Chicago on November 10. The following constitute the board of directors: Drs. Harris P. Mosher, Boston, president; Frank R. Spencer, Boulder, Colo., vice-president; Hanau W. Loeb, St. Louis, secretary and treasurer; Thomas E. Carmody, Denver; Joseph C. Beck, Chicago; Thomas H. Halsted, Syracuse, N. Y.; Robert C. Lynch, New Orleans; Burt R. Shurly, Detroit; Ross H. Skillern, Philadelphia; William P. Wherry, Omaha. The office of the board is at 1402 South Grand Boulevard, St. Louis, Missouri. The board comprises representatives of the five national otolaryngologic associations; the American Otological Society, the American Laryngological Association, the American Laryngological, Rhinological and Otological Society, the American Academy of Ophthalmology and Otolaryngology and the Section of Laryngology, Otology and Rhinology of the American Medical Association. The object of the association is to elevate the standard of otolaryngology, to

familiarize the public with its aims and ideals, to protect the public against unqualified practitioners, to receive applications for examination in otolaryngology, to conduct examinations of such applicants, to issue certificates of qualification in otolaryngology and to perform such duties as will advance the cause of otolaryngology. The first examination will be held at the time of the meeting of the American Medical Association.

Seventh Texas Short School for Filter Plant Operators will meet in Austin January 26-31. This school will be held under the auspices of the Texas Section of the Southwest Water Works Association and in coöperation with the University of Texas, Austin City Water Department and the Texas State Board of Health. Mr. C. N. Avery, president of the Texas Section of the Southwest Water Works Association, will be the general chairman of the school, and Mr. E. C. H. Bantel, professor of civil engineering in the University of Texas, will be the director. The sessions during the first three days of the school will be held in the class rooms of the University of Texas, so as to afford facilities for laboratory work. During the remaining three days, the sessions will be held at the Stephen F. Austin Hotel. The program, this year, will be unusually interesting, many distinguished guests taking part therein, as well as a number of water works and engineering experts from various cities of the State. All filter plant and water works operators are urged to attend this school, as well as all public health officers. The questions to be considered should be of special interest to them and should prove beneficial both to them and the communities which they serve. All others, whether doctors or laymen, who are interested in the vital question of good water supply, are also cordially invited to attend any or all of the sessions. In addition to the scientific sections, there will be attractive entertainment features. A large and enthusiastic attendance is confidently expected.

SOCIETY NEWS

Bastrop County Medical Society has elected the following officers for the ensuing year: President, Dr. C. H. Otken, Paige; vice-president, Dr. Geo. H. Jones, Smithville; secretary-treasurer, Dr. T. B. Taylor, Bastrop (re-elected).

Bell County Medical Society met at Temple, December 3, at which time the following papers were presented: "Ureteral Stone," Dr. C. M. Simpson, Temple; *X*-Ray Diagnosis of Renal Stone," Dr. R .T. Wilson, Temple; "The Use of Iodine in the Treatment of Goiter," Dr. A. C. Scott, Jr., Temple.

The following officers were elected for 1925: President, Dr. D. L. Wood, Killeen; vice-president, Dr. J. S. McCelvey, Temple; secretary-treasurer, Dr. Edgar R. Boren, Belton (re-elected); censor, Dr. J. W. Pittman, Belton.

Dinner was served the society at 6:30, at the Harvey House.

Bexar County Medical Society met October 23, with 150 members and 5 visitors present.

Dr. I. T. Cutter read a paper entitled, "Vaginal Caesarean Section with Report of Three Cases." The history of the operation was outlined and the indications for its performance. He stated that the favorable time for this operation is from the third to the seventh month of pregnancy, and that it should only be attempted in the ninth month in women whose birth canals had been tested out by previous births. A thorough knowledge of the size of the fetal head and the birth canal should be obtained before attempting this operation. In the eighth or ninth month, if the baby is alive, an abdominal Caesarean section is preferable. The essayist cited three cases illustrating the indications for Caesarean section.

Dr. C. C. Cade, opening the discussion, pointed out that when the operation was first instituted, in 1895, it became very popular with some surgeons, and a great many ill results followed where the operation was illy chosen. He stated that at the present time definite indications for the operation have been established. The paper was further discussed by Drs. Homer T. Wilson, C. M. Decker and Minnie O'Brien.

In closing, Dr. Cutter stated that the operation requires plenty of help and good light. The mortality should be quite low. The surgeon should be aware of the fact that the uterus is turned somewhat and may be off midline, and that in incising the uterus he should be careful to stay in the midline to avoid unnecessary hemorrhage.

Dr. Lucius D. Hill read a paper on "Certain Conditions in the Newborn." He stated that the vital statistics show that birth mortality has been decreased from twenty to ten per cent. However, the death rate during the first month of life has not been decreased, 50 per cent. of deaths among infants occurring at this time, and many of which deaths can be prevented. It has been shown that 50 per cent. of the deaths in infants dying in the first week, are due to intracranial hemorrhage. Symptoms of this condition and treatment for the same by the injection of whole blood, were pointed out. Thymic enlargement is sometimes the cause of death due to pressure. This enlargement is hard to diagnose except by therapeutic tests. Under radiation therapy the thymus rapidly resolves to normal and the symptoms disappear. Pemphigus neonatorum is a condition of the newborn that should receive early attention. Tetanus also occurs sometimes in early life. Hypertrophic pyloric stenosis is a condition which is often overlooked. Inanition fever was also described. The author stated that many cases of inanition dated from strenuous purgation.

Dr. Minnie O'Brien opened the discussion. She stressed the importance of keeping the temperature in the baby's room at a constant level of about 80° F. The blood coagulation time should be tested early in order to be prepared should hemorrhage occur. She also discussed the possibility of many fatalities from pemphigus neonatorum. Giving plenty of water early helps in the prevention of inanition fever. The paper was further discussed by Drs. Geo. B. Cornick, Mary C. Harper, S. H. Kaliski, M. J. Bliem and I. T. Cutter.

Dr. Hill, in closing, stated that nurseries should be kept at the proper temperature and well ventilated. The baby's bath should be given in a room warmer than the nursery. He discussed the treatment of impetigo in infants and advised supplemental feedings before the mother's milk started flowing freely.

Bexar County Medical Society met November 20, with 95 members and 6 visitors present.

A letter was read from the Harrison County Medical Society opposing the $10.00 increase in State Association dues for 1925. A committee was appointed to let this society know the attitude of Bexar County Medical Society in this matter.

Dr. Jose Izquierdo, senior surgeon of the Venezuelan army, read a paper on "The Prostate in Its Hypertrophy." In his paper he paid particular attention to the prostate from the standpoint of the embryologist and the anatomist, suggesting a new method of approach for enucleation of the gland, which he had perfected upon the cadaver. The paper was well illustrated by stereopticon slides. The discussion was opened by Dr. H. McC. Johnson, who expressed great interest in the new operation de-

scribed by Dr. Izquierdo. He emphasized the point made by the writer, that the enucleation of the hypertrophied prostate left behind only normal prostatic tissue. He was more inclined to the inflammatory theory of the etiology of hypertrophy of the prostate.

Dr. R. L. Works of Brownsville, read a paper on "Eye Ground Manifestations in Systemic Diseases," which was discussed by Drs. J. H. Burleson, F. H. Rosebrough, J. S. Steele, E. M. Sykes, O. H. Judkins, I. T. Cutter and Lee Rice.

Bexar County Medical Society met December 4, with 45 members and 3 visitors present.

Dr. Thomas Dorbandt outlined the milk ordinance which the city board of health will propose to the commission for adoption. This ordinance permits the dairyman to label his product as to grade, and he is then free to place whatever grade of milk he wishes on the market and the public is free to buy whatever grade it wants. In other words, this ordinance would automatically force the dairyman to either put good milk on the market or get out of business. Dr. W. A. King also discussed the milk ordinance, stating that the society's support was solicited in creating favorable public opinion toward this ordinance.

Dr. Homer T. Wilson read a paper entitled "The Diagnosis of Chronic Pancreatitis." He enumerated the difficulties in making a diagnosis of pancreatitis. He stated that the pancreas, like the liver, was able to function over a long period of time, even though a large part of the organ was diseased. Where the pancreatic ducts are affected, symptoms are produced early. The symptoms of acute pancreatitis are: Sudden onset, pain, vomiting, nausea, distention, rigidity and collapse. Prioni's sign is a localized tenderness at a point 4 cm. above the umbilicus and 2 cm. to the left of the midline. There may be no fever early in the case, but glycosuria and hyperglycemia are found.

Diagnosis of chronic pancreatitis is much more difficult. It is generally associated with diseases of the gallbladder or its ducts. There is dyspepsia, not seasonal in nature and with no periodicity, as in ulcer of the stomach. There is pain, flatulence, constipation, loss of weight and asthenia. Various tests for determining the function of the pancreas, were then outlined by the writer. He stated that the diagnosis rests upon the history of the case and the clinical signs, and often is not made until an exploratory laparotomy has been done. The paper was discussed by Dr. Stout, who stated that the greatest difficulty in arriving at a clinical diagnosis is that there is no definite symptom complex associated with it. He stated that there was no reliable quantitative pancreatic secretion test.

Dr. S. P. Cunningham described a case of acute pancreatitis, which was diagnosed at operation.

Dr. Lee Rice stated that he had tried all of the tests for pancreatic function and found none of them to be of any real practical value. The fact that gallbladder disease is so frequently associated with pancreatitis is of great moment, both from the standpoint of etiology and treatment. He asked Dr. Wilson to differentiate between acute pancreatitis and acute perforated gastric ulcer.

In closing, Dr. Wilson stated that the best treatment for acute pancreatitis is gallbladder drainage, and for the chronic type removal of foci of infection, lavage, and if necessary, surgical drainage of the gall-bladder. The most important differential diagnostic point between acute pancreatitis and acute perforated gastric ulcer, is the profound prostration in the former.

A communication was read from the State Secretary, Dr. Holman Taylor, relative to electing delegates to the Annual Session of the State Association, and to patronizing advertisers in the State JOURNAL.

Dr. W. H. Hill was received by transfer from the Galveston County Medical Society.

Bexar County Medical Society met December 11, with 42 members and 3 visitors in attendance.

Dr. M. J. Bliem read a paper on "Psychology and Medicine." Dr. Thos. Dorbandt, in discussing this paper, stated that Dr. S. Weir Mitchell had probably made as deep a study of practical psychology as any one and had obtained splendid results in the application of psychology in his "rest cure" cases.

Dr. Lucius D. Hill stated that one could notice the psychological effect on infants of a neurotic mother and the opposite effect if the mother was well and happy.

Dr. E. V. DePew believed that every doctor uses applied psychology to a certain extent. Many patients can be cured by psychotherapy when their illness is based on some slight physical ailment.

Dr. Homer T. Wilson stated that the essayist had steered clear of danger points usually seen in writings on applied psychology.

Dr. Bliem, in closing, stated that the value of suggestion may not only be upon the mind but upon functional or organic diseases as well.

Dr. W. S. Hanson read a paper on "Cerebral Arteriosclerosis."

Dr. Thomas Dorbandt, opening the discussion, stated that he believed that in most cases of arteriosclerosis the basis for the condition would be found in intoxication due to foci of infection, over-eating, drug addiction, etc. He stated that the medico-legal aspects of the condition should be recognized, as these patients are irritable, easily influenced, and are apt to make their wills in favor of people who are not deserving of the same.

Dr. Lee Rice stated that in looking over the protocols of autopsies performed at John Sealy Hospital, at Galveston, he had found twelve of the patients suffering from general arteriosclerosis, nine of whom showed considerable involvement of the cerebral vessels. There are two general types of sufferers from arteriosclerosis. In the first type are those who perform much hard physical work and live under poor hygienic conditions; they usually have a generalized arteriosclerosis. The other class are office-workers and professional men who take little exercise and relax very rarely; they are more prone to cerebral arteriosclerosis. It has been found that it is the sodium and not the chlorine ion in table salt that causes the trouble in arteriosclerosis. One must be careful in restricting the diet to keep the patient within physiologic limits.

Dr. L. J. Manhoff asked why it was that in advancing arteriosclerosis the systolic blood pressure was lowered.

In closing, Dr. Hanson said that his paper was written for the purpose of securing greater attention for the elderly patient when beginning to show symptoms of arteriosclerosis.

Dr. S. W. Crossley was received by transfer from the El Paso County Medical Society.

Bexar County Medical Society met December 18, at which time the following officers were elected for the ensuing year: President, Dr. J. A. McIntosh; vice-president, Dr. W. E. Nesbitt; secretary, Dr. R. Stuart Adams (re-elected); treasurer, Dr. C. E. Scull (re-elected); censor, Dr. J. W. Goode; delegates, Drs. S. P. Cunningham and R. E. Bowen; alternates, Drs. Minnie C. O'Brien and J. S. Steele.

Bowie County Medical Society met November 28, at which time the following officers were elected for the ensuing year: President, Dr. C. A. Smith, Texarkana; vice-presidents, Dr. G. A. Hays, Texarkana, and W. H. Evans, Maud; secretary-treasurer, Dr. J. T. Robison, Texarkana (re-elected); censor, Dr. R.

Q. McClure, Texarkana; delegate, Dr. J. N. White, Texarkana; alternate, Dr. Wm. Hibbitts, Texarkana.

Brown County Medical Society met December 9, at which time the following officers were elected for the ensuing year: President, Dr. Ben M. Shelton, Brownwood; vice-president, Dr. T. B. Bailey, Brownwood; secretary-treasurer, Dr. J. W. Tottenham, Brownwood; censor, Dr. W. H. Paige, Brownwood; delegate, Dr. W. B. Anderson, Brownwood; alternate, Dr. H. L. Lobstein, Brownwood.

Cameron County Medical Society met at San Benito, December 5, with the following in attendance: Drs. Cole, Spohn, Cash, Watkins, Vinsant, Johnson, Sizer, Hunter, Brown, Yantis, and Rentfro. Dr. Bosworth, city health officer of Harlingen, was present as a visitor.

Resolutions endorsing the work of the State Board of Health and its president, Dr. Malone Duggan, were unanimously adopted.

Cameron County Medical Society met December 18, at San Benito, with the following members and visitors present: Drs. Brown, Cash, Cole, Davidson, Hockaday, Hunter, Morris, Spivey, Tribble, Utley, Vinsant, B. O. and B. M. Works, Yantis, Johnson, Spohn, Watkins, W. E. Whigham, Bosworth, D. D. S., Crux and several ladies.

Following the banquet, which is an annual affair, a business session was held and the election of officers, which resulted as follows: President, Dr. H. K. Loew, Brownsville (re-elected); vice-president, Dr. C. M. Cash, San Benito (re-elected); secretary-treasurer, Dr. John Hunter, LaFeria (re-elected); delegate, Dr. John Hunter; alternate, Dr. W. E. Spivey, Brownsville.

Following the election of officers, the secretary was surprised by a Christmas gift from the society in the form of a purse raised by the members, and he was instructed to exercise his own judgment in the selection of a present as a token of appreciation of the society for his untiring efforts in its behalf.

Cisco Medical Society met December 1, at which time the following officers were elected: President, Dr. K. J. Scott of Cisco; secretary, Dr. D. Ball of Cisco. The following members were then elected as the city board of health: Drs. W. P. Lee, G. W. Griswold and E. L. Graham.

Coleman County Medical Society met at Coleman, December 4.

Dr. L. P. Allison reported a case of malignant abdominal tumor. Dr. H. H. Mitchell of Valera, read a paper on "Business Methods in Practice," which was discussed by both doctors and bankers, the latter being present by invitation, to assist in the discussion of this subject.

The following officers were elected for 1925: President, Dr. Jason Tyson, Santa Anna; vice-president, Dr. R. H. Cochran, Coleman; secretary-treasurer, Dr. J. M. Nichols, Coleman; censor, Dr. H. H. Mitchell, Valera; delegate, Dr. R. R. Lovelady, Santa Anna; alternate, Dr. H. H. Mitchell.

At the close of the meeting a banquet was served in the Overall Memorial Hospital. The next meeting will be held in Santa Anna, the first Thursday in March, 1925.

Collin County Medical Society has elected the following officers for 1925: President, Dr. W. G. Harris, Plano; vice-president, Dr. W. R. Mathers, McKinney; secretary-treasurer, Dr. P. D. Robason, McKinney (re-elected); delegate, Dr. J. W. Largent, McKinney; alternate, Dr. R. L. Davis, McKinney.

Denton County Medical Society met in Denton, December 11, at which time the following officers were elected for 1925: President, Dr. Rebecca M. Evans, Denton; vice-president, Dr. D. F. Kirkpatrick, Lewisville; secretary-treasurer, Dr. M. D. Fullingim, Denton; delegate, Dr. J. M. Inge, Denton; alternate, C. D. Franklow, Pilot Point; censor, Dr. John L. Hooper, Denton.

Eastland County Medical Society met at Cisco, December 9, with 22 members and visitors present.

The following program was rendered: Invocation, Rev. L. A. Webb, presiding elder, Cisco; Address of Welcome, Mr. R. Q. Lee, president of the Chamber of Commerce; Response to address of Welcome, Dr. S. C. Richardson, Eastland; "Traumatic Surgery," Dr. E. L. Graham, Cisco; "The More Common Skin Diseases with Special Reference to Treatment" (illustrated with lantern slides), Dr. J. B. Shelmire, Dallas; "History of Dentistry," Dr. W. S. Poe, D. D. S., Eastland.

Through the courtesy of Manager Fanning of the Judia Theater, the theater was turned over to the medical society for the afternoon session.

Officers for the ensuing year were elected as follows: President, Dr. M. L. Stubblefield, Gorman; vice-president, Dr. Thomas Patterson, Rising Star; secretary, Dr. E. L. Graham, Cisco; delegate, Dr. R. C. Blackwell, Gorman.

After the session at the theater the society adjourned to the Rotary-Lions Club room, where an elegant banquet was served by the ladies of the First Methodist Church. At this banquet the newly elected officers were introduced and made brief addresses. Dr. Gregory, the retiring secretary, thanked the members for their hearty coöperation during his eight years' tenure of office as secretary of the society and requested the same coöperation for his successor.

The next meeting of the society will be held the third Tuesday in February, at Ranger, the time for holding the bimonthly meeting being changed from the second to the third Tuesdays.

El Paso County Medical Society met November 24, with 22 members and several visitors present. Among the visitors were 11 dentists. The scientific program was in charge of the El Paso Dental Society. The first paper was read by Dr. M. F. Bauchert and was entitled "Focal Infection of Dental Origin." The second paper was read by Dr. L. A. Neil, "Periodontal Pathology, or the So-Called Pyorrhea Alveolaris." Dr. Neil illustrated his paper by some excellent slides which demonstrated the growth of bone around the teeth following their treatment for this disease. The papers were discussed by Drs. Leigh, Werley, Davis, Strong, Turner and Branch among the physicians, and Dr. Robinson for the dentists. The discussion was closed by Drs. Bauchert and Neil.

El Paso County Medical Society met December 1, with 52 members and 2 visitors present, at which time the following officers were elected for the ensuing year: President, Dr. John A. Hardy; vice-president, Dr. C. P. Brown; secretary-treasurer, Dr. H. H. Varner; delegates, Drs. W. L. Brown and C. M. Hendricks; alternates, Drs. Will Rogers and T. J. McCamant; censors, Drs. E. J. Cummins and E. A. Duncan.

Refreshments in the form of doughnuts and cider (tequila?) were served and cigars were passed around.

Falls County Medical Society met at Marlin, December 8, with the following members and visitors in attendance: Drs. N. D. Buie, O. T. Bundy, A. C. Hornbeck, S. S. Munger, H. S. Garrett, Glass, A. J. Streit, J. W. and Oscar Torbett, E. P. Hutchings, J. B. White, Howard Smith, J. H. Barnett, S. P. Rice and B. G. Ward, of Marlin; Dr. E. House of Ferris; Dr. A. C. Scott, Jr., and F. M. Longmire of Temple, and Dr. Edward Smith, Waco. There were also present a number of laymen from Marlin and vicinity.

The following officers were elected for the ensuing

year: President, Dr. J. H. Barnett, Marlin; vice-president, Dr. E. P. Hutchings, Marlin; secretary-treasurer, Dr. Howard Smith, Marlin; delegate, Dr. S. P. Rice, Marlin; alternate, Dr. O. T. Bundy, Marlin; censors, Drs. B. G. Ward and Oscar Torbett of Marlin; legislative committee, Drs. N. D. Buie, S. P. Rice and J. W. Torbett, Marlin.

Following the election of officers, Dr. E. House of Ferris, gave an interesting talk on "Scopolamin Anaesthesia in Criminology." A resolution endorsing the work of Dr. House was unanimously adopted by the society.

Grayson County Medical Society met December 18, at Denison, at which time the following officers were elected for the ensuing year: President, Dr. G. E. Henschen, Sherman; vice-president, Dr. A. G. Sneed, Denison; secretary-treasurer, W. A. Lee, Denison (re-elected); censor, Dr. J. A. Mays, Denison; delegate, Dr. M. M. Morrison, Denison; alternate, Dr. Arthur Gleckler, Denison.

Following the election of officers an excellent five-course banquet was served on tables arranged to form the letter "A," in honor of Dr. Alec W. Acheson of Denison. Dr. Holman Taylor, secretary of the State Medical Association, paid a wonderful tribute to Dr. Acheson and his diligent work in the profession. He read from the transactions of the State Medical Association an article written by Dr. Acheson in 1873, describing the health conditions of the then young border town of Denison. Following Dr. Taylor, Dr. Joe Becton of Greenville, gave a toast to Dr. Acheson, stating that during his 52 years of practice Dr. Acheson had been one of the brightest stars in the Texas galaxy of medicine.

Dr. E. L. Seay of Denison, presented Dr. Acheson with a fine smoking set in behalf of Grayson County Medical Society, as a small token of the esteem in which Dr. Acheson was held by the society. A gold lined hypodermic case was presented to Dr. Acheson by J. F. Tinsman. Dr. Acheson responded in his characteristic style, reviewing the early days of the medical profession in Denison. He provoked a great deal of merriment when he stated that in his first years of practice a doctor was not considered worth while unless he wore a high beaver hat and carried a gold-headed cane. He then exhibited a gold-headed cane which he stated some of his friends had presented to him some fifty years previously, wishing to see him reach the *highest pinnacle* of the profession.

Dr. Holman Taylor addressed the society on "The Value of the State Medical Association to the Medical Profession."

Hardeman-Cottle County Medical Society has elected the following officers for 1925: President, Dr. C. B. Jones, Quanah; vice-president, Dr. Frank Stone of Paducah and B. A. Dillard of Chillicothe; secretary-treasurer, Dr. J. J. Hanna, Quanah (re-elected); delegate, Dr. J. T. Horton, Quanah.

Jefferson County Medical Society has elected the following officers for 1925: President, Dr. Dru McMicken, Beaumont; vice-president, Drs. C. M. White, Beaumont; secretary, Dr. A. R. Autrey, Port Arthur; censors, Drs. J. W. Garth, E. D. Mills and W. H. Brandau, of Beaumont; delegate, Dr. F. Boyd, Beaumont; alternate, Dr. H. E. Alexander, Beaumont.

Medina-Uvalde-Maverick-Val Verde-Etc. County Medical Society has elected the following officers for 1925: President, Dr. D. A. York, Del Rio; secretary, Dr. W. H. Smith, Hondo; delegate, Dr. S. B. Hudson, Sabinal; alternate, Dr. Lorenzo Cantu, Eagle Pass.

Navarro County Medical Society met December 1, at which time the following officers were elected: President, Dr. I. N. Suttle, Corsicana; vice-president, Dr. W. R. Russell, Purdon; secretary-treasurer, Dr. J. Wilson David, Corsicana; delegate, Dr. W. D. Cross, Corsicana; alternate, Dr. T. S. Slater, Corsicana; censor, Dr. R. C. Curtis, Corsicana.

Nolan County Medical Society met December 1, at Sweetwater, with all but three members of the society in attendance. The following scientific program was rendered: "Normal Labor," Dr. A. A. Chapman, Sweetwater; "Eclampsia," Dr. C. A. Rosebrough, Sweetwater.

The following officers were elected for the ensuing year: President, Dr. C. A. Rosebrough, Sweetwater; vice-president, Dr. J. W. Young, Roscoe; secretary, Dr. G. Burton Fain, Sweetwater (re-elected); delegate, Dr. J. W. Young; alternate, Dr. W. F. Pool, Sweetwater.

Drs. K. M. Hodges, A. Brann and A. J. Wimberly, dentists, of Sweetwater, were elected honorary members of the society.

Parker-Palo Pinto County Medical Society met in Weatherford, December 8, with a good attendance of members and visitors.

Dr. Ben L. Schoolfield of Dallas, read a paper on "Mobilization of Ankylosed Joints," in which he showed the value of fascia lata transplants as an operative procedure.

Dr. H. L. Cecil of Dallas, read a paper entitled, "Pathology and Treatment of Prostatic Hypertrophy," in which he stressed the perineal method of Young, and read statistics showing the mortality rate to be four per cent, or one-half that of the suprapubic method.

The following officers were elected for the ensuing year: President, Dr. J. H. Eastland, Mineral Wells; vice-President, Dr. F. E. Harrison, Graford; secretary-treasurer, Dr. W. B. Lasater, Mineral Wells; censor, Dr. F. E. Harrison.

Potter County Medical Society has elected the following officers for 1925: President, Dr. A. J. Caldwell, Amarillo; vice-president, Dr. B. M. Puckett, Amarillo; secretary-treasurer, Dr. Richard Keyes, Amarillo (re-elected); delegate, Dr. S. P. Vineyard, Amarillo; alternate, Dr. H. H. Latson, Amarillo.

Tarrant County Medical Society met November 18, with about 40 members present.

Dr. Jack Daly presented a case of blastomycosis, in an elderly man. This case was discussed by Drs. Bursey, Thomason and Schoonover.

Dr. Frank P. Smith introduced Dr. L. H. Martin, state supervisor of city and county health officers, who spoke on "The History and Principles of Preventive Medicine." This paper was discussed by Dr. M. E. Gilmore.

Dr. Hodges McKnight read a paper on "Observations on Chlorine Gas Treatment of Respiratory Infections," which was discussed by Drs. E. H. Bursey, T. C. Terrell, Will Horn, and Harry Braun.

Dr. H. L. Cecil of Dallas, read a paper on "Cystoscopic Removal of Ureteral Calculi." At the close of the paper he exhibited an instrument which he had devised for crushing stones within the ureter. The paper was discussed by Drs. F. S. Schoonover, R. S. Mallard and C. H. Harris.

Tarrant County Medical Society met December 2, and elected the following officers: President, Dr. C. F. Clayton; vice-president, Dr. Arthur Brown; secretary-treasurer, Dr. N. L. Dunn; censors, Drs. E. H. Bursey and E. L. Howard; delegate, Dr. Edwin Davis; alternate, Dr. S. A. Lundy.

Tarrant County Medical Society met December 16, in business session. Dr. C. P. Schenck, editor of the *Bulletin*, reported that six issues of this publication had been printed in 1924. Dr. R. H. Gough, business manager of the *Bulletin*, reported that it was being conducted on a paying basis.

Dr. F. S. Schoonover, chairman of the committee on the educational campaign for Tarrant County, re-

ported that addresses had been made in Tarrant County by the following members of the society: Drs. I. C. Chase, C. H. Harris, M. E. Gilmore, L. A. Suggs, W. S. Horn, W. L. Allison and Holman Taylor. In addition to the addresses by the local members, Dr. M. L. Graves of Galveston, spoke before the Fort Worth Rotary Club.

Flowers were ordered sent as a Christmas token to Dr. Bacon Saunders, one of the pioneer members of the society, who is seriously ill at St. Joseph's Infirmary.

Resolutions of sympathy upon the death of Dr. George D. Bond, were adopted.

The Ladies Auxiliary of the Tarrant County Medical Society met in the club rooms, November 15, with 27 members present.

Dr. K. V. Kibbie gave an address on "Health Problems in Public Schools." He gave some valuable statistics on the spread of communicable diseases in the schools and suggested ways and means by which the auxiliary could individually coöperate with the school physician in control of these diseases.

Dr. Holman Taylor spoke on "Coöperation Between the Medical Society and the Auxiliary." He urged that the original object of the organization be kept constantly in mind, which, as its name implies, is to aid the medical society in its endeavors to educate the laity concerning public health matters. He closed with the plea that the medical society and auxiliary keep in closer touch with each other's work.

A motion was carried that the auxiliary sponsor, a school girl, to be selected by the Welfare Association.

A motion was also carried that the organization place *Hygeia* in the Carnegie Library and in the reading rooms of the Y. W. C. A., and that it assist the American Medical Association in giving this important magazine wide publicity.

At the conclusion of the program refreshments were served and a pleasant social hour enjoyed.

Travis County Medical Society met at the Driskill Hotel, Austin, December 18, at which time the following officers were elected for 1925: President, Dr. Geo. M. Decherd; vice-president, Dr. S. E. Hudson; secretary-treasurer, Dr. Dalton Richardson (re-elected); delegate, Dr. C. W. Goddard; alternate, Dr. G. H. Gilbert; censors, Drs. R. E. Cloud, A. F. Beverly and W. E. Watt.

Williamson County Medical Society met at Georgetown, December 10, with the following members present: Drs. Helms, Hopkins, Sams, Vaughan and Johns, of Taylor; Dr. Crawford of Jarrell; Dr. Kirkpatrick, of Thrall; Dr. Foster, of Granger; Dr. Wedemeyer, of Walburg, and Drs. Moses, Schultz, Martin, Thomas and Pettus, of Georgetown. The following visitors were also in attendance: Drs. Potter, Gober and Longmire, of Temple; Drs. Key and Thomas, of Austin; Mrs. C. C. Foster, of Granger, and Dr. J. C. Granbery, of Southwestern University.

Dr. Granbery addressed the society in the interest of the State Health Department, urging the endorsement of Dr. Duggan for State Health Officer under the incoming administration. The society passed a resolution unanimously endorsing the continuation of Dr. Duggan's services as State Health Officer.

Dr. O. F. Gober of Temple, made a short talk on the best way to keep up interest in a county medical society, following which some interesting clinical cases were presented and discussed.

The following officers were elected for 1925: President, Dr. Y. F. Hopkins, Taylor; vice-president, Dr. E. M. Thomas, Georgetown; secretary, Dr. W. G. Pettus, Georgetown (re-elected); delegate, Dr. C. C. Foster, Granger.

At the close of the meeting, a sumptuous banquet was served members and visitors, at the Dew Drop Inn.

Van Zandt County Medical Society met at Canton, December 5, with 11 members present.

Dr. B. B. Brandon of Edgewood, read a paper on "Diathermy," which was discussed by Drs. M. L. Cox and W. L. Garland.

The following officers were elected for 1925: President, F. V. Bryant, Martin's Mill (re-elected); vice-president, Willard C. Hearin, Canton; secretary-treasurer, D. Leon Sanders, Wills Point (re-elected); delegate, D. Leon Sanders; alternate, B. B. Brandon; censors, M. L. Cox of Canton, V. B. Cozby of Grand Saline and R. L. Gray of Ben Wheeler; committee on public health and legislation, L. W. Shoemaker of Canton, F. L. Lee of Ben Wheeler and B. B. Brandon of Edgewood.

North Texas District Medical Association met in the Ritz ball-room, Dallas, December 9-10. More than 275 members registered during the two days of the meeting.

The meeting was called to order at 9:00 a. m., December 9, by Dr. Robert H. Milwee of Dallas, chairman of the arrangements committee. The address of welcome on behalf of the city was delivered by Mayor Louis Blaylock. The address of welcome on behalf of the Dallas County Medical Society was delivered by President Dr. F. A. Pierce. The response for the association was delivered by its president, Dr. G. D. Lain, of Sanger.

The following scientific program was rendered: "Scarlet Fever—Its Management and Treatment," Dr. W. P. McCall, Ennis; "Broncho-Pulmonary Spirochetosis With Report of Cases," Dr. Harold Freed, U. S. Veterans' Bureau, Dallas; "Correlation of Pathology and Symptoms in Goitre," Dr. C. W. Barrier, Fort Worth; "What Shall We Do With Endocrinology?" Dr. H. M. Winans, Dallas; "Common Errors in Infant Feeding," Dr. R. H. Moore, Dallas; "Prevention and Treatment of the Common Cold," Dr. O. M. Marchman, Dallas; "*X*-Ray Diagnosis of Peptic Ulcer," Dr. R. T. Wilson, Temple; "Tetra-Ethyl Lead: Its Function as an Industrial Hazard and as a Public Health Hazard," Dr. Lewis W. Fetzer, Dallas; "Some Personal Observations in Acute Glandular Fever," Dr. C. P. Hawkins, Fort Worth; "Preventive Medicine," Dr. J. F. McVeigh, Fort Worth; "Adequate Treatment for Hereditary Syphilis," Dr. F. S. Schoonover, Fort Worth; "Syphilis," Dr. J. B. Shelmire, Dallas; "Differential Diagnosis and Management of Laryngeal Diphtheria," Dr. B. J. Berger, Dallas; "Preventive Medicine During Pre-School Age," Dr. R. C. Spence, Dallas; "Tuberculosis of Bone and Joints" (illustrated), Dr. W. B. Carroll, Dallas; "Cystic Bone Lesions, Probably Enchondroma," Dr. T. H. Thomason, Fort Worth; "Cancer—A Curable Disease and Cause of Failure in Treatment," Dr. A. C. Scott, Temple; "Prostatic Hypertrophy, Pathology and Treatment," Dr. Howard L. Cecil, Dallas; "Dental Radiographs," Dr. W. M. Dickens, Greenville; "Sacral Anesthesia," Dr. A. C. Gilbert, Dallas; "So-Called Epilepsy, Discussion and Presentation of Cases" (illustrated), Dr. E. R. Carpenter, Dallas; "Indications for Caesarian Section," Dr. C. R. Hannah, Dallas; "Periarterial Sympathectomy," Dr. Jack Daly, Fort Worth; "Hemorrhoids," Dr. E. V. Dickey, Dallas; "Uses of Mercurochrome in General Surgery," Dr. J. S. Tomkies, Dallas; "Extrophy of the Bladder and Allied Conditions," Dr. J. Spencer Davis, Dallas; "Mobilization of Ankylosed Joints" (illustrated), Dr. B. L. Schoolfield, Dallas; "Ectopic Pregnancy—Report of Case," Dr. Edwin Davis, Fort Worth; "The Use and Abuse of Pituitary Extracts," Dr. W. Y. Ward, Ivanhoe; "Conduct of Labor in the Average Obstetrical Case," Dr. C. R. Hannah, Dallas; "Blood Transfusion in Obstetrical

and Gynecological Practice," Dr. Wm. C. Tenery, Waxahachie; president's address, Dr. G. D. Lain, Sanger; "Primary Repair of the Cervix," Dr. J. W. Bourland, Dallas; "Eclampsia," Dr. D. Y. Stem, Slidell; "Analgesia in Obstetrics," Dr. O. C. Nevill, Bonham; Adenomyoma of the Recto-vaginal Septum With Decidual Reaction Occurring in Early Pregnancy—Sent in With Diagnosis of Carcinoma of Vagina," Dr. R. J. White, Fort Worth; "Hemorrhoids in Pregnancy," Dr. Curtice Rosser, Dallas.

Officers for the ensuing year were elected as follows: President, Dr. J. H. McLean, Fort Worth; vice-president, Dr. M. S. Seely, Dallas; secretary, Dr. Will S. Horn, Fort Worth (re-elected).

Denison was chosen as the next meeting place, and the dates were set for June 16-17, 1925.

Luncheon was served at the Ritz, each day of the session, complimentary to the out-of-town members, the Dallas County Medical Society and the Woman's Auxiliary acting as hosts. The members of the association were entertained by a performance at the Majestic Theater on the evening of the 9th.

The meeting was pronounced one of the most enjoyable in the history of the association.

CHANGES OF ADDRESS.

Dr. M. B. Richards, from Ashland to Harleton.
Dr. J. W. Duncan, from Jourdanton to Tilden.
Dr. C. W. LeGrand, from Hempstead to Lampasas.
Dr. W. H. Hill, from Galveston to San Antonio.
Dr. L. W. Dallas, from League City to Bartow, Fla.
Dr. P. C. Clements, from Center to Manning.
Dr. T. R. Morehead, from Ben Franklin to Mertzon.
Dr. H. Burdick, from Lott to Copperas Cove.
Dr. Jack Saunders, from Fort Worth to Bonham.
Dr. A. H. Williams, from Hagansport to Talco.
Dr. H. E. Luehrs, from Tamina to Junction.

DEATHS

George Doherty Bond died December 6, 1924, at Fort Worth, following an extended period of ill health.

Dr. Bond was born at Spring Hill, Tennessee, June 10, 1860. He was the son of Thomas B. and Ann (McLemore) Bond, who were members of pioneer families of Tennessee. He received his preliminary education in the public schools of his home town and at Spring Hill Academy. He graduated from the Medical Department of Vanderbilt University in 1880 and for three years practiced medicine at Spring Hill, following which he located at Hillsboro, Texas. He returned to his home town of Spring Hill in 1887 for his bride, Miss Fannie Guthrie. From this union two children were born, Dr. Thomas B. Bond of Fort Worth, who until the time of his father's death had been associated with his father in the special field of radiology, and a daughter, Mrs. Reid Hasgall (nee Martha Bond). Mrs. Fannie Guthrie Bond died at Hillsboro in November, 1898. In October, 1905, he married Miss Lucie Guthrie.

Dr. Bond was one of the first physicians in the Southwest to foresee the great field for röentgenology and to specialize in this important branch of medicine. In 1903 he took a postgraduate course at the Illinois School of Electro-Therapeutics, at that time the foremost school of its kind in the United States. He continued to do a large general practice throughout Hill County, in addition to his special *x*-ray work, until 1907, when he moved to Fort Worth and limited his practice to *x*-ray and electro-therapeutics. He was an enthusiastic member of the State Medical Association and an untiring worker, presenting frequent educational papers before state, district and county medical societies, urging the importance of the *x*-ray, both in diagnosis and therapy. He was one of the early members of the American Röentgen-Ray Society, and in 1914 organized and was the first president of the Texas Röentgen-Ray Society, which now has a large membership over the entire State. He served as president of the Hill County Medical Society in 1905 and was Professor of Röentgenology in the Fort Worth School of Medicine up to the date that this school combined with Baylor University at Dallas, in 1918. He was a member of the Methodist Episcopal Church, South.

Dr. Bond was an enthusiast in his work and his enthusiasm was contagious. Those with whom he came in contact could not but be impressed with his

DR. GEORGE D. BOND.

devotion to his chosen profession. He was a true gentleman of the old school, always cordial, always sincere. To know him was to love him as was attested by the host of friends from both the profession and the laity, who attended his funeral services at his home on Fifth avenue. His remains were shipped to Hillsboro and buried in the family cemetery there. Resolutions of sympathy were adopted by the Tarrant County Medical Society, paying a glowing tribute to Dr. Bond as a physician and as a man.

Dr. Bond is survived by his wife and two children and by a brother, Dr. Wm. Bond, of Hillsboro, Texas.

Dr. Lee Maxwell Nance died at his home in Dallas, December 1, after an illness of three days.

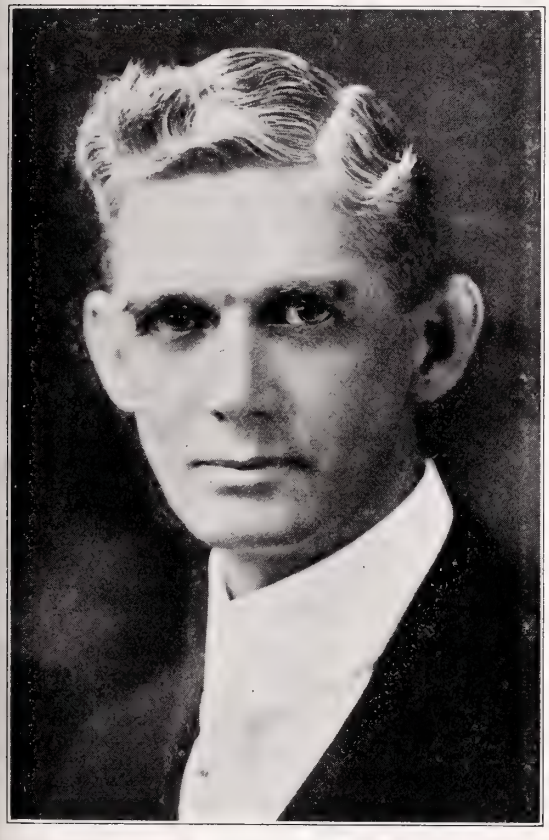
Dr. Nance was born at Crawford, Mississippi, in 1873. He was educated in the public schools at that place and at the Mississipi A. & M. College, receiving the degree of B. S. from that institution in 1893. He received his M. D. degree from Baylor University in 1910. He was associate professor of gynecol-

ogy in Baylor University from 1912 to 1920, and since that date had also been associate gynecologist at Baylor Hospital and Dispensary.

Dr. Nance had been a member of Dallas County Medical Society ever since his graduation and was also a Fellow of the American College of Surgeons. He was a member of Trinity Valley Lodge, A. F. & A M. and of Hella Shrine. He was also an active member of the First Baptist Church. His funeral was conducted at the cemetery by the Masonic Lodge.

At a called meeting of the Dallas County Medical Society resolutions of sympathy on the death of Dr. Nance were adopted. These resolutions read in part:

"Dr. Nance was a high-class man, distinctly a gentleman in thought, word and deed. He was never



DR. LEE M. NANCE.

unmindful of those proprieties observed by noble natures, and his always earnest attitude left doubt in the minds of none who knew him. His qualities of mind to which were added accurate scientific preparation, made him a useful physician, a skillful surgeon and a safe counselor, for a host of those who will sadly miss his ministrations."

Out of respect to the memory of Dr. Nance, Baylor Medical College closed at noon on the day of his funeral.

Dr. Nance is survived by his wife, Mrs. Dorothy Rose Nance; two sons, L. M. Nance, Jr., and W. R. Nance; a daughter, Miss Dorothy Rose Nance; his mother, Mrs. Emma Nance, and a brother, George Nance, both of Newton, Mississippi, and four sisters, Mrs. H. B. McKnight, of El Paso; Mrs. D. K. Cason, of Nacogdoches; Mrs. Mattie Halbot, of Starkville, Mississippi, and Mrs. Bert Halbot, of West Point, Mississippi.

Dr. James Monroe Wells of Houston, died at his home, November 2, 1924.

Dr. Wells was born in Bankston, Mississippi, May 18, 1863. He came to Texas at the age of seventeen, making his home with an aunt, Mrs. E. Drane, at Columbus, Texas, at which place he read medicine under Dr. J. W. Harrison. He received his degree in medicine from Tulane University in 1898, and for the following thirteen years practiced in Liberty County, Texas, when he became camp physician for the State at Sugarland, Texas. He located in Houston in 1917, where he continued to practice until the time of his death.

Dr. Wells was married to Miss Minnie Damon of Eagle Lake, Texas, in 1892, by whom, together with one son, Damon, he is survived, another son, Shearer, having died in 1912.

BOOK NOTES

Angina Pectoris. By Sir James Mackenzie, M. D., F. R. S., F. R. C. P., LL. D., Ab. and ED., F. R. C. P. I. (Hon.), Director St Andrews Institute for Clinical Research, Consulting Physician to the London Hospital, Consulting Physician to His Majesty The King in Scotland. 8 mo. Cloth. 253 pages, 77 illustrations. Price, $9.00. Henry Frowde and Hodder & Stoughton, The Lancet Bldg., London.

This latest work of Mackenzie's is an elaboration of his views on angina pectoris expressed in his book on Diseases of the Heart. The book is well illustrated and is based on accurate clinical observations of this interesting and little understood condition, over a period of many years. Nearly 100 pages of the book are taken up with the records of 160 cases of angina pectoris. Some of these reports are given in detail, including pulse tracings and autopsy findings. Others are but brief outlines. About the only criticism that can be offered of the book is that it does not take into consideration any of the work or opinions of Mackenzie's contemporaries. The author has stated in his preface that in addition to presenting his observations on angina pectoris, he had another purpose in view in writing this book, which was "to illustrate methods of investigation which are essential to the practice of medicine * * * * * It was my aim in writing this book to make no statement without clearly indicating the reasons for making it. I have, therefore, had to give the records of a large number of cases so that the reader may be able to see whether my statements are justified."

Those who have read Mackenzie's previous works will not have to be urged to study this present volume. The careful reader will find it both stimulating and instructive.

Inflammation in Bones and Joints. By Leonard W. Ely, M. D., Associate Professor of Surgery, Stanford University. Octavo Cloth, 433 pages, 144 illustrations. J. B. Lippincott Company, Philadelphia and London.

This work on inflammation in bones and joints is the most complete on this subject that we have seen. In his preface the author admits that many of the statements he makes in this book, which are based upon his own clinical observations, may be open to criticism, as in fact statements based on clinical observations of any disease may be. The book is divided into eight sections. The first section is entitled "General Observations," and under this heading the pathology of bone and joint inflammation is discussed and also the principles underlying the treatment for these conditions. Under Section II, "Acute Osteomyelitis and Arthritis" are considered. This section embraces ten chapters. Section III takes up "Chronic Osteomyelitis;" Section IV, "Chronic

Arthritis;" Section V, "Tuberculosis of Special Joints," which section is divided into nine chapters, each chapter describing tuberculosis of a different joint; Section VI, "Other Forms of Arthritis of the First Great Type or Group;" Section VII, "The Second Great Type of Chronic Arthritis," and Section VIII, "Arthritis Caused by Developmental Abnormalities." Under this last section are described such comparatively rare conditions as Legg's Disease, Koehler's Disease and the Osgood-Schlatter Disease. A complete bibliography follows each section, and in many instances each chapter. This book will be found especially valuable to those interested in orthopedic surgery. The author's style is concise and yet readily understandable. The text is made interesting by frequent reference to cases that the author has seen. The illustrations are numerous and for the most part excellent, the radiograms illustrating Legg's Disease being the only poor ones in the book. (Practically all of the illustrations that we have ever seen depicting this rare osseous malformation have been hazy and indistinct.) We noted a few inaccuracies in references and a few typographical errors. In general, however, the book is well edited, the type good and the volume well bound. It is believed that this work is a valuable contribution to the subject of bone and joint pathology

Manual of Obstetrics. By John Osborn Polak, M. Sc., M. D., F. A. C. S., Second edition containing a special section on endocrinology. Octavo, Cloth; 488 pages, 122 illustrations, including three color plates. Price, $6.00. Physicians and Surgeons Book Company, New York City.

This excellent work on obstetrics is based on the author's unusual opportunities in twenty-five years' experience in the teaching of under-graduates and postgraduates in obstetrics. Numerous excellent illustrations add greatly in giving a clear understanding of the subject under discussion. The section on endocrinology which has been included in the present edition, is especially interesting in that it applies the extensive work that is being done in this comparatively new field to the special subject of obstetrics. Although this subject has not been worked out as well as could be desired, it opens a new and broad field for research and study, which may hold the key to some of the knottiest problems obstetrics has offered. The book is printed on good paper and the printing and binding leaves little to be desired.

The Practice of Pediatrics. By Charles Gilmore Kerley, M. D., formerly Professor of Diseases of Children in the New York Polyclinic Medical School and Hospital, and Gaylord Willis Graves, M. D., Associate in Diseases of Children in the College of Physicians and Surgeons, New York City. Third Edition, revised and reset. Octavo, Cloth, 922 pages, 150 illustrations. Price, $9.00. W. B. Saunders Company, Philadelphia and London, 1924.

This well known work on diseases of children, which first appeared in 1914, has achieved great popularity among practitioners as well as students of medicine. This new edition, appearing ten years after the first publication of the book, is undoubtedly a very thorough revision of the original work. While the bulk of the volume remains the same, many changes have been made to bring it fully up to date and to include the newer diagnostic and therapeutic methods. A number of chapters have been rearranged and these changes are a decided improvement. The name of Dr. Gaylord W. Graves appears in the present work as co-author with Dr. Kerley. It is believed that this volume will enjoy a continued popularity.

New Views of Diabetes Mellitus. By P. J. Cammidge, M. D., and H. A. H. Howard, B. Sc. Octavo, Cloth; 611 pages, 85 diagrams and charts. Price, $6.50. Henry Frowde and Hodder & Stoughton, Lancet Bldg., London.

In their preface, the authors of this interesting work on Diabetes Mellitus inform the reader that the present work is the result of observations upon some "1,200 cases of diabetes and glycosuria, at all ages and of every degree of severity, some of which have been under our observation for fifteen years or more." Much original work has been done by the authors, one of whom is a physician and the other a chemist interested in the chemistry of carbohydrate metabolism. The authors discuss and compare the results obtained from the administration of an extract of the pancreas prepared by Mackenzie Wallis, with insulin as prepared by Banting and Best. It is interesting to note that they believe that good results have been attained by the oral administration of Wallis' pancreatic extract, in view of the fact that numerous authorities in this country believe that pancreatic extracts administered by the mouth are worthless. It is illuminating, however, to note that in the cases recited by the authors Insulin was usually finally resorted to, and with distinct benefit. Dr. Cammidge admits that Insulin is the more valuable of the two, but thinks that the Mackenzie Wallis extract is of value in diabetes when administered orally. The work goes exhaustively into the chemistry of carbohydrate metabolism and many charts and tables are given to support the authors' views. It is believed that those interested in the great problem of the treatment of this heretofore little understood disease, will find this volume extremely interesting and inspiring.

Manual of Diseases of Nose, Throat and Ear. By E. B. Gleason, M. D., LL.D., Professor of Otology, Medico-Chirurgical College Graduate School, University of Pennsylvania. Fifth edition, thoroughly revised. 12 mo., 660 pages, 212 illustrations. Price, $4.00 net. W. B. Saunders Company, Philadelphia and London, 1924.

This textbook on diseases of the nose, throat and ear is so well known that it is unnecessary to attempt any extended discussion. As stated above, the volume has been thoroughly revised so as to bring it abreast of the progress that has been made in the treatment of diseases of the nose, throat and ear. The volume well fulfills the purpose for which it was written.

How We Resist Disease—An Introduction to Immunity. By Jean Broadhurst, Ph. D., Assistant Professor of Biology, Teachers College, Columbia University. 12 mo. Cloth; 248 pages, 138 illustrations and 4 color plates. J. B. Lippincott Company, Philadelphia and London, 1923.

This book, belonging to a series known as Lippincott's Nursing Manuals, is written especially for the instruction of nurses and general college students. The profuse and excellent illustrations aid materially in conveying to the student a good general idea of the subject of bacteriology and immunity. The subject of immunity is a very difficult one and one that is little understood by the average physician. It is therefore believed that many physicians who did not have the opportunity of studying bacteriology in their medical courses will find this book a good introduction to the subject. It makes no pretense of being an exhaustive work on either bacteriology or immunology.

Texas State Journal of Medicine

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Vol. XX **February 1925** **No. 10**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Our Legislative Policy was set out for us by the House of Delegates last May. In the adopted recommendations of the Council on Legislation and Public Instruction, appeared the following two paragraphs:

"That the position of the Association in its opposition to any system of multiple boards of medical examiners, or separate standards of requirements for those who would treat sick people, and for a consistent, high educational requirement, be reiterated, with emphasis.

"That the Council be directed to continue in its coöperation with the State Board of Health and other organizations interested in the public health, in the matter of revising and improving the laws of this State pertaining to the public health, including the care and treatment of the insane."

The following resolutions were adopted by one of the general sessions:

"*Whereas*, we have just listened to an expose of the deplorable conditions in the handling of our insane, epileptics, drug habitues and inebriates; and

"*Whereas*, many efforts have been made in the past by newspapers, county judges and medical societies, without bringing about the needed change; and

"*Whereas*, this is purely a medical matter; therefore, be it

"*Resolved*, that the State Medical Association of Texas, now assembled in general session, place itself on record as urging the following remedies:

"(1) That the laws of this State be changed so that a humiliating public trial of the insane will be abolished.

"(2) That adequate room be provided in our institutions, so that our insane may not be held in jail.

"(3) That one or more psychopathic hospitals be established where such patients may voluntarily seek observation and treatment, and where acute cases and questionable criminal cases, can be immediately sent for observation and study.

"(4) That a separate institution be established for the care and treatment of the criminal insane.

"(5) That a separate department be provided for the care and treatment of the alcoholic and narcotic cases, and proper laws be placed on our statute books governing the commitment of these cases.

"(6) That a separate department be provided at the Epileptic Colony for the care of the insane epileptics.

"(7) That a commission be created, composed of individuals properly qualified, the majority of whom shall be physicians who have had at least three years experience in the treatment of the insane in the State institutions, to have control of all institutions handling the insane, epileptics and drug habitues, said commission to replace the present Board of Control in this particular.

"(8) That a careful study be made of the question of sterilizing certain classes of the insane, feeble-minded and unfit, and of their marriage.

"(9) That the President of this Association be authorized to appoint a committee of seven, whose duty it shall be to study the above problems and take the necessary steps to carry out this program."

Pursuant to these pronouncements, the Council on Legislation and Public Instruction formulated a platform, as follows:

"1. Revision of the public health laws, to the end that the Health Department may operate efficiently and economically. It is felt at this time that the most sensible way to bring about this condition of affairs is to provide for a Board of Health with interlocking terms of office and sufficient power to control health conditions, the State Health Officer to be an employee of the Board.

"2. Adequate provision for the care and treatment of our insane. It is believed that if a law may be devised which will provide for a psychopathic hospital, for the observation, diagnosis and treatment of those believed to be insane, to which commitment may be both on a volunteer and compulsory basis, many otherwise hopelessly insane may be returned to useful and safe citizenship, the residue going to the so-called insane asylums for incarceration and humane care.

"3. Maintenance of the present system of a single standard of educational requirements for all who would practice medicine, no matter after what so-called school or system of practice, is considered a public health problem of supreme importance. An effort will doubtless be made to secure separate boards for those who disagree with the facts of science as pertain to the practice of medicine. Such a system is held by us to be not only dangerous to the public health but unconstitutional as well. It is an imposition on the medical profession to require constant contention against serious efforts of this sort. The medical profession cannot evade the issue and stand from under the responsibility of protecting the public against unwisdom of this sort."

Each member of the present Legislature received a copy of this platform prior to his election, and the great majority of them gave assent thereto.

It would seem, therefore, that the Legislature now assembled may be expected to act with good judgment in handling medical and public health legislation. It is recognized that the demand for economy in the matter of appropriations, as well as in the matter of time to be devoted to legislation, will serve somewhat as an inhibition, but it is hoped that a maximum of legislation of this sort will be enacted.

It will be observed that we have been directed to "coöperate with the State Board of Health" and other organizations in the matter of revising our public health laws. This we have done, and a complete reorganization of the Board of Health is provided for in a bill now in the hands of the State Health Department. This bill establishes a board of health with an overlapping membership and with power to employ a State Health Officer. It provides for the bureaus necessary to carry on the work of the Health Department with a maximum degree of success and at a minimum of expense. It provides for salaries both for the State Health Officer and the heads of the bureaus, which, while not adequate, will insure more dependable and continuous, if not better service than we have been able to secure. We make this statement with all due respect to those devoted employees of this department who have heretofore rendered such valiant service. This bill, if enacted into law, will result in an expenditure well within the appropriation recommended by the Board of Control. We cannot say at this writing whether the bill will be introduced. The consensus of opinion of legislators interested in the public health, and the administration, will govern in this particular. We can say, however, that if it becomes a law it will be found entirely constitutional, which is a statement not always possible to be made of even more ambitious legislation.

The problem of better care and treatment of our insane, has been before the State Medical Association for many, many years. Until very recently we maintained a standing committee on the subject. The committee was abandoned when it became apparent that our efforts in that direction were useless. During the recent sessions of the Legislature, a commission was appointed (to serve without expense to the State) to study "the eleemosynary institutions of the State, in the hope of finding better and more economical methods of conducting the State's eleemosynary institutions, and, especially for the purpose of seeking out means of preventing in the future, as far as possible, dependency and delinquency." This commission was headed by the Honorable C. E. Beasley of Sulphur Springs, who will be remembered as a strong supporter of public health legislation; the Honorable John F. Wallace, another advocate of scientific public health and medicine; Speaker R. E. Seagler of the House of Representatives, who was known to be in sympathy with such legislation; Senator J. D. Strong, of similar sentiments; Senator J. W. Thomas, Mrs. Josephine Daniel, Messrs. Nat Washer and Elmer Scott and Dr. A. Caswell Ellis, of the School of the Philosophy of Education, University of Texas. This commission made a most thorough study of the problems before it, one of which was the care and treatment of the insane. Our committee, consisting of Dr. Wilmer Allison, chairman, Drs. O. L. Norsworthy, J. J. Terrill, T. L. Moody, John W. Burns, J. N. White and A. L. Lincecum, elected to work with the Eleemosynary Commission, eventually finding itself in entire sympathy with the conclusions thereof, and joining in the forthcoming recommendations. In the meantime, the Rotary Club of Houston, under the leadership of Dr. O. L. Norsworthy, joined in the effort. The

result of the study of these agencies is embodied in a bill written by Messrs. Beasley and Wallace, and introduced by Mr. Wallace, which, while it does not finally solve the problem, is a long step in that direction. The outstanding feature of the measure is the provision that psychopathic hospitals be established in connection with the two medical colleges of the State, one at Galveston and the other at Dallas, and the volunteer commitment to these hospitals for observation and decision, of those believed to be insane, with the idea that their condition may be determined and, if possible, cure effected before the problem of final commitment is to be decided. There are other factors of importance, but discussion of these will be deferred to another time. This bill is in the hands of the Eleemosynary Commission, and has the approval of our Council on Legislation and Public Instruction.

A bill establishing a board of examiners, and standards for those who would practice chiropractic medicine, independently of the present Medical Practice Act, has been introduced in the Senate by Senator Parr. It has not at this writing (February 1) been introduced in the House. Acting under instruction, the Council on Legislation and Public Instruction will resist to the uttermost this effort at class legislation. It is believed that the present Legislature will not tolerate the legislation. The preceding Legislature studied the whole problem of medical practice to such an extent as to make it unlikely that the present Legislature will undo the policy established at that time, namely, that there shall be only one board of medical examiners, which shall be fair to all who would practice medicine, no matter by what method. It is believed that the present Medical Practice Act is as fair and practicable as such a measure can be.

Several other measures having to do with public health, some of them important, have been introduced, but the Council on Legislation and Public Instruction has decided that it will actively interest itself in none of them, except upon invitation of the Legislature or the administration. Even in the matter of resisting chiropractic legislation, the Council is acting in conjunction with and upon the invitation of the State Board of Medical Examiners. Whether the Council will engage actively in any of these issues will be determined by circumstances.

Our observation is, that the present Legislature is inclined to be safe and sane in its consideration of public health and medical legislation. We are pleased that this is true, and feel that our publicity and educational campaign is in a large measure responsible therefor. This is not to advise that we lie down to pleasant slumbers. On the contrary, we must be wide awake, and show interest in all matters of legislation, and particularly those about which we know, as all good citizens should.

Alcohol Legislation has been in prospect since most of the candidates for Governor announced their determination to curtail the illicit sale and use of alcoholic liquors, and particularly since the Democratic platform contained a very strong plank dealing with the subject. Bills have been introduced in the Legislature, having for their purpose the carrying out of the platform demands. We understand that the principal change is in the increase of red tape governing the prescribing of alcohol by physicians. These bills, incidentally, have been introduced by legislators who are unquestionably friendly to the medical profession, and who do not believe that the medical profession as a whole are bootleggers. It simply happens that conditions are bad and it seems desirable to better them. It may be that the methods contemplated are impractical and unjust, but the fact remains that an emergency appears to confront us, and it may be that it is of sufficient moment to warrant the adoption of any reasonable expedient, even somewhat in contravention of the rights of the physician and the welfare of his patients.

The State Medical Association will not likely concern itself with this legislation, although it might well afford to do so. Physicians are divided on this question, almost as widely as are other people. Any effort on our part to intervene would inevitably result in a house divided against itself, and unless some important reason is put forward why we should deal with this problem, as an organization, it will remain for those of us who are interested, to act individually.

The important point to be considered, is the charge made by some of those who are in favor of this legislation, that a large proportion of the medical profession is desirous of bootlegging whiskey and prostituting their high profession for gain in the sale of whiskey prescriptions. It is quite true, no doubt, that there are those in our ranks who will thus befoul their own nest, but it is furthermore true that we are doing the best we can to prevent such practice. We believe we can promise that, as time goes on, this abuse will be curtailed materially and even abolished. However, the dividing line between the usefulness of a drug and the prescribing of a drug for profit, is so fine that there is always danger of making a mistake, and we feel that it is of greater importance to be certain that no principle of law is ever adopted and no principle of action ever agreed to, that will influence the judgment of the physician in the matter of treating his patient on other grounds than the good of his patient. It is unfortunate that well meaning people, in and out of the profession, should be willing to curtail every privilege in the interest of enforcement of a law bearing on only one or a few of these.

The American Medical Association has in clear-cut and emphatic tones, adopted resolutions bearing on the alcoholic question, the gist of which is that no legislature should seek to practice medicine, and that no agency should be allowed to intervene between the physician and his patients in the matter of privileged communications. The laws governing the prescribing of alcohol now do both of these things, which is most unfortunate. The American Medical Association has recognized the abuses of the privileges of the medical profession in the matter of prescribing alcoholic liquors, and has resolved in emphatic terms to offer every assistance to the prohibition enforcement officers, and in Texas such assistance is being actively rendered by the State Medical Association.

Our interest should lie in the preservation of the privileges of the profession rather than in the details of the enforcement of any laws pertaining to liquor regulations. It is to be hoped that some way will be found whereby this problem may be solved without placing on the profession of medicine and the profession of pharmacy the odium these two noble professions at the present time bear.

Coöperation Under the Sheppard-Towner Act.—A strong fight is being made in the Legislature against the appropriations necessary to secure the benefits of the so-called Federal Maternity and Infancy Act, more generally known as the Sheppard-Towner Act. There seems to be a strong reaction against such intervention in state affairs as this law provides. At the present time Texas enjoys the benefits of this law to the tune of several thousand dollars per year, which is matched by money from its own treasury, and a most beneficial and far-reaching work is being prosecuted. Whether or not the policy of accepting Federal supervision in such affairs is sound, has had to be ignored by the medical profession heretofore, in order that there may be money to carry on this most important work. As a matter of fact, the medical profession throughout the entire country protested against the enactment of this legislation, and by virtue of this protest the bill was so modified that when enacted into law it carried practically none of the menacing provisions it started out with. At the same time, the principle remains the same, and there seems to be no good reason why the states should exchange their birthright for this particular mess of pottage, other than expediency. In other words, a mess of pottage is worth a good deal to a starving man, whereas a birthright is of value only to the man who is not dying from hunger.

Our Bureau of Child Hygiene, which is the beneficiary of the Sheppard-Towner money, has been most active, indeed. It has rendered great service to the cause of health, and we are willing to overlook many things because of that fact. We have before us a report of this bureau for the past two years, and it would be most interesting to print it in detail, but space will not permit. It will be remembered that whatever this bureau does in carrying out its purposes, is done in coöperation with the medical profession of the State. It is possible that some of the many employees of the bureau may inadvertently overstep the limit that should govern, but those are incidents not to be worried about.

This work should continue, and whether or not it does will be determined by the Legislature, in considering the appropriations bill. Whether the State Medical Association takes an interest in this particular legislation, will depend upon the State Health Department and the administration. We are here to help in any way we can, and are prepared to overcome prejudice and override, at least temporarily, principles which we believe to be of great importance, the whole field of public health and the practice of medicine being considered.

Federal Health Legislation.—There is at the present time before our Congress, a bit of legislation of supreme importance to the medical profession and the public health. In the Senate, the bill is known as "S. B. 3445," and in the House as "H. B. 9625." It is

denominated a bill for the "reorganization and more effective coördination of the executive branch of the government, to create a department of education and relief, and for other purposes." This measure should never be enacted into law, if we understand it correctly, and if our vision of the future is worth anything.

Some years ago the administration at Washington started out to reorganize the various departments and so coördinate them that overlapping endeavors be eliminated and the whole administration be carried out with economy and effectiveness. No enterprise that we can recall has appealed to us so strongly as this one. We were even prepared to take chances on injuring our splendid "Public Health Service" by merging it into a department of which it was only a part, provided it could maintain its present organization, which is based on scientific attainment and not political expediency, and could assume all health and medical functions of the government that do not essentially pertain to such concrete organizations as the Army and the Navy.

It seems that for one reason or another, practically all of the health agencies of the government, except the Public Health Service itself, have been allowed to remain as before, and only the Public Health Service is shifted. The Children's Bureau remains in the Department of Labor; the division of Vital Statistics of the Bureau of Census, is still in the Department of Commerce, the Public Health Service among the Indians remains a function of the Bureau of Indian Affairs in the Department of the Interior. There are, we believe, two hospitals, neither of which have directly to do with the public health, that are transferred to the new department with the Public Health Service. Indeed, for the most part the health activities of the government are outside of the new department, and those activities included more directly pertain to the practice of curative than they do to preventive medicine.

If this bill becomes a law, there will be a Department of Education and Relief, under the direction of a Secretary, a member of the President's Cabinet, an Assistant Secretary for Education, another for Public Health and another for Veteran Relief. The secretary and each of the assistants will be appointed by the President, by and with the consent of the Senate. There are no requirements as to technical qualification for any of them, and the system clearly indicates that politics rather than science will dictate their selection. Incidentally, there will be changes whenever the administration changes, and perhaps oftener than that. In fact, the great U. S. Public Health Service will become a bureau, dominated by politics and not by science. It is a dangerous procedure, and the adoption of such a plan will effectively block all efforts to provide our government with an effective public health service. We have an idea that our Senators and Congressmen would be pleased to hear from us in this regard.

Local Committees for the Annual Session are announced by the Travis County Medical Society, as follows:

Committee on Arrangements.—Dr. Joe Gilbert, chairman; Drs. Dalton Richardson, Goodall H. Wooten, Ralph E. Cloud, F. P. McLaughlin, W. Neal Watt, S. E. Hudson, T. J. Bennett T. C. Hairston.

Committee on Finance.—Dr. Will E. Watt, chairman; Drs. Lee E. Edens, H. B. Granberry, Geo. M. Decherd, J. R. Nichols, J. W. Bradfield, Ernest Krueger W. E. Holtzclaw.

Committee on Halls.—Dr. C. W. Goddard, chairman; Drs. S. J. Clark, C. A. Mathews, C. Burford Weller, Louis H. Kirk, M. P. Smartt, C. C. Black.

Committee on Exhibits.—Dr. Summerfield Taylor, chairman; Drs. J. J. Brady, Clarence Weller, S. A. Woolsey, J. E. Howze, W. B. Black.

Committee on Lanterns.—Dr. G. H. Gilbert, chairman; Drs. J. W. Gibson, J. M. Loving, W. D. Lightfoot, W A. Harper.

Committee on Alumni Banquets.—Dr. M. H. Boerner, chairman; Drs. J. F. Gullett, H. S. McKeown, J. C. A. Eckhardt, Chas. S. Gates.

Committee on Hotels.—Dr. J. C. Thomas, chairman; Dr. Sam Key, Ben F. Jones, F. C. Gregg, P. E. Suehs, Wm. W. Greer.

Committee on Enterainment.—Dr. A. F. Beverly, chairman; Drs. J. W. McLaughlin, N. R. Jackson, C. H. Brownlee, Z. T. Scott, R. W. Shipp, H. L. Hilgartner, Claude Lauderdale, G. M. Graham, John Preston, J. T. Wilhite, Mary Elizabeth Roe.

Committee on Golf.—Dr. Z. T. Martin, chairman; Drs. R. W. Shipp, H. A. Scott, Summerfield Taylor, M. H. Boerner.

Committee on Public Lectures.—Dr. Joe S. Wooten, chairman; Drs. H. W. Harper, C. W. Goddard, W. E. McCaleb, T. O. Maxwell, F. B. Shuford.

Committee on Transportation.—Dr. H. S. McKeown, chairman; Drs. H. A. Scott, R. V. Murray, M. F. Kreisle, R. M. Wickline, Sam Haigler, T. R. Pettway.

Those of our readers who will have to do with the annual session might well consider this list. Some will be interested in one committee and some in another. It is certain that all will be interested in the Committee on Hotels, and it would be a wise idea to have Dr. Thomas, chairman of the committee, reserve accommodations now. Quite a few will be interested in alumni banquets. That committee is even now calling for information as to what is wanted by the various alumni associations represented in the State. A few will want to know about arrangements for golf. Any of our members who may know of a commercial enterprise they would like to see

represented among the exhibits, should write to Dr. Summerfield Taylor, chairman of the Committee on exhibits. Dr. Beverly, chairman of the Committee on Entertainment, will be pleased to receive suggestions. Dr. Wooten, chairman of the Committee on Public Lectures, would like to be informed as to who can and should be asked to deliver public lectures, either preceding, during, or following the annual session. We assume that the efforts of the Committee on Finance will be confined to the local brethren.

In passing, we may say that arrangements for the annual session are well in hand, and that prospects are good for a big time. It is not too early to begin making plans to attend. President Bledsoe earnestly desires that there be a large attendance, for the particular reason that big problems are to be considered.

The Payment of Dues, somewhat to our surprise, is proceeding quite satisfactorily, indeed. We had anticipated that the increase in dues would seriously handicap secretaries in their collections. In the light of the rather unexpected, and in some instances harsh criticism of the House of Delegates and our leaders as well, because of the raise in dues, success in this particular is indeed gratifying. Up to this time last year (January 31), 368 members had paid their dues, the amount collected being $1,840. To date (January 31), 299 members have paid into the treasury as dues, the sum of $4,485. In other words, we are 69 members in arrears and $2,645 ahead. We have an idea that the paid up membership would be at least on a par with that of last year, except for the doubt as to just how much is to be paid to the State Association. Numerous letters have come to us from county society secretaries desiring to know whether county society dues are to be taken from the State Association dues or are in addition thereto. We extend our congratulations to councilors and county secretaries, and our sincere appreciation of this good service.

It may be well to understand that the dues collected for this year are intended to cover exceptional activities. It will be remembered that the dues last year were $5.00, and that approximately the sum of $8,000 had been subscribed voluntarily to cover the publicity campaign set on foot at that time. All told, therefore, for these two years, a per capita of $11.00 was available. It will be remembered, also, that the increment for this year goes into the general fund and not into any special fund. In other words, $1.00 goes into the Defense fund and $2.00 in the JOURNAL fund, as heretofore, the balance to be used as may be required in support of the various activities of the Association, upon budgets approved by the Board of Trustees.

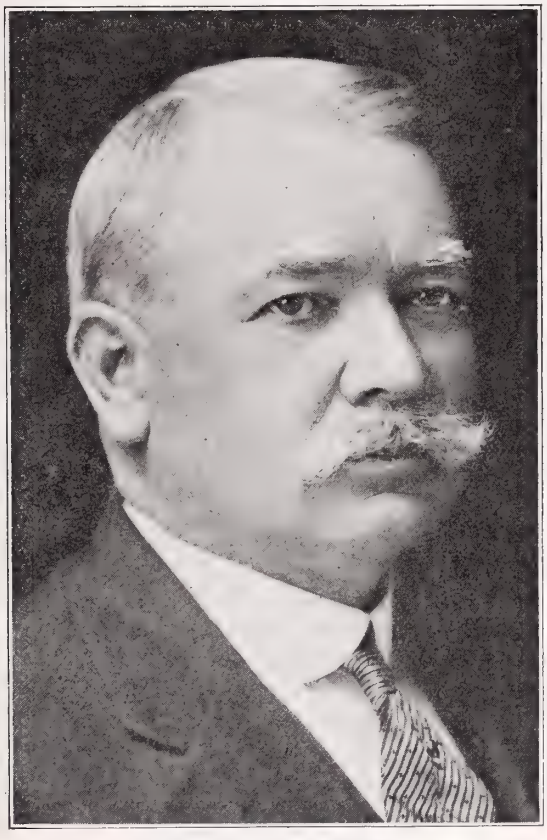
In connection with the problem of maintenance of our membership, we cannot forbear some slight reiteration. The increase in dues was made by the House of Delegates, by a large majority, and not until after the purposes for which the increase was to be made had been thoroughly expounded and thoroughly understood by all concerned. There can be no doubt as to the authority of the House of Delegates to take the action it did take, and as advocates of the democratic system of government we can hardly afford to discredit our agents. In the face of criticism of those who have carried out the behests of the House of Delegates, our members should suspend judgment until an accounting has been made. We cannot expect the responsible officers of the Association to act vigorously and effectively if they are to be constantly in fear of adverse criticism. Judgment is a thing that we buy and sometimes pay big prices for, and it is the exercise of judgment that counts in leadership. It is entirely proper to criticize our servants, and even to discharge them if they do not serve us properly, but it is hurtful to hastily discredit them in the eyes of the public, particularly that part of the public which desires to injure us. Undoubtedly, the medical underworld is disturbed by our activities of last year and are anxiously watching us this year. If there is any considerable defection in membership, that fact will be accepted as an evidence of a disintegrating cause, and joy will be unconfined. Let the House of Delegates work its will when it next convenes, but let not prejudice be aroused in the meantime, and unjust, adverse or preconceived opinions influence decision.

Particularly would we urge that those who feel that our publicity campaign has been a failure, defer decision in that regard until after the close of the present session of the Legislature.

We hold no brief to defend our leaders, either in or out of the House of Delegates, and being a hired hand we do not need to defend ourself. We are interested in carrying out our duties as Secretary-Editor, and our first job for the year is to collect dues. With what our membership shall decide in regard to policy, and what our House of Delegates shall direct, we are officially concerned, but remotely as a member of the Association we do have considerable interest in the matter—but that is another question. We sincerely hope the dues will continue to come in satisfactorily.

Our New State Health Officer, Dr. H. O. Sappington, is a gentleman and a scholar, and a physician and politician of considerable attainments. It is with pride and pleasure that we present him to the medical profession of Texas, and direct attention to the very good likeness of him herewith.

Dr. Sappington has been a citizen of Texas for many years, coming to us from Illinois, in 1885. He refuses to testify as to the date of his birth (and we find it hard to believe the record, as carried in that otherwise very



DR. H. O. SAPPINGTON.

accurate book, the Directory of the A. M. A.). At any rate, he is young enough to be active and old enough to know what activities to indulge in and which to let alone. Perhaps these qualities are inherent, and may account for his political success.

Dr. Sappington was first a civil engineer, picking up the details of that intricate profession in practical employment, never having studied civil engineering in college. He was employed by the H. & T. C. Railroad in 1886, and later became county surveyor in the new county of Foard, for which county he prepared the field notes of survey, etc., for record at Austin. He served for a time as draftsman in the office of the State Land Commissioner at Austin. In 1895, he matriculated in the Medical Department of the University of Texas, from which institution he graduated in 1898. He served as an interne for a year, and then accepted employment with mining companies in the then Indian Territory, and Old Mexico. Returning to Galveston in 1901, he accepted the position of superintendent and house surgeon of John Sealy Hospital, and became assistant to Dr. J. F. Y. Payne, professor of obstetrics and gynecology, which latter position he continued to fill after leaving the John Sealy Hospital and taking up general practice in the city of Galveston.

Dr. Sappington's success in politics has been rather unique, considering that he has always been a practicing physician. Physicians do not, as a rule, succeed in politics. He was Commissioner of Streets and Public properties of Galveston from 1913 to 1917, when he announced for mayor. He was defeated in that race, but was elected in 1919, and served two years in this capacity. He then became City Health Officer, which position he held at the time of his appointment to the important position of State Health Officer.

We congratulate the people of Texas, and extend our appreciation to Governor Ferguson for this selection. We predict for Dr. Sappington a successful service and pledge him the unswerving support of the medical profession of the State.

New Councilor for the First District.—Dr. R. B. Homan, for several years Councilor of the First District of the State Medical Association, has resigned and Dr. W. L. Brown, also of El Paso, has been appointed by President Dr. Bledsoe to fill the unexpired term (two years from this May). Dr. Homan is a man of large affairs, conducting the Homan Sanatorium at El Paso. He has recently been ill and his physician refuses to permit him to carry on the additional and sometimes onerous work of councilor. His resignation was accepted with genuine regret, and our gratitude to him for his services, and best wishes for his future, are heartily extended.

Dr. Brown is an old-timer. Not that he is old in years, for he is not (being only one year older than we are), but he has fought, bled and almost died over a wide area of country and under many and varied circumstances. He does not have to admit it, having been away from that state for more than ten years, but he was born in Kansas, September 23, 1873, to be exact, and has a trace of Cherokee Indian blood in his veins, extending back for two generations beyond that of his father. On his mother's side, he is blue-stocking English. He claims to have

had no particular schooling until he entered medical college (which statement we find it rather difficult to believe). He is a graduate of Rush Medical College, class of 1896. Following graduation, he served an internship in the Cooke County Hospital, in Chicago, from December, 1896, to June, 1898. His first practice was for two years in Missouri, from which place he removed to the great Southwest, because of failing health. It is an ill wind that blows no good, and Texas and the State Medical Association have been the beneficiaries of this particular piece of personal bad luck.

Dr. Brown has always been active in organized medicine. He has served in all of the offices of the El Paso County Medical Society, and at the time of his appointment as councilor was serving as delegate to the State Medical Association. He was the originator of the *Bulletin* of the El Paso County Medical Society, which was the pioneer in the county society bulletin line in Texas, and which eventually became quite an ambitious medical journal, merging finally into *Southwestern Medicine,* the official organ of New Mexico and Arizona State Medical Associations, El Paso County Medical Society and the Medical and Surgical Association of the Southwest. He was the first editor of the *Bulletin,* serving in that capacity for several years. He has been at different times delegate to the American Medical Association. Perhaps his most notable contribution to organized medicine was the part he played in the prosecution of advertising fakers in his section of the State, some fifteen years ago, which effort resulted in great good to the suffering public. He is a member of the Western Surgical Association and a Fellow of the American College of Surgeons.

Dr. Brown has contributed materially to current medical literature. He is the author of some twenty-five or thirty original articles bearing on a wide variety of subjects. Perhaps the most notable of these have been those pertaining to investigations made in conjunction with his brother, Dr. C. P. Brown, of various phases of bone and periosteal transplantation, bone grafting, arthroplasty, and the like. Recent contributions we might mention with some pride, are "The Postoperative Use of the Duodenal Tube," "Bone Lesions of Smallpox," and "Temporary Internal Fixation of Compound Fractures."

We mention these matters not for the purpose of bragging on our new councilor (for we owe him nothing, except our thanks for a party in Juarez, once), but in order to let the few of our brethren who are not personally acquainted with Dr. Brown know that our President is still on the job, and knows how to pick and choose.

The Doctor and the Telephone.—If there are any two agencies of the public welfare more important, and more closely related than the doctor and his telephone, we do not know of it. The telephone and the police, or the telephone and the fire department, are in the same class, but neither the policeman nor the fireman is so dependent upon the telephone as is the doctor; likewise, neither the policeman nor the fireman is so imposed upon through the medium of the telephone as is the doctor. The doctor has long recognized this fact, but the public has been slow getting at it. The telephone company has come to the assistance of the doctor, and throughout the country suggestions are made to patrons as to ways and means of conserving the services of the two. We are in receipt of such a pamphlet, issued by the Southwestern Bell Telephone Company, which we commend most highly, and which we present to our readers herewith:

"To most people the telephone is a well-trained servant. But to the doctor this same telephone is his master and seldom allows the doctor a minute in the twenty-four hours when he can feel that he is not on call. This is not the fault of the telephone, but is due to thoughtlessness of many of the doctors' patrons. Below are some suggestions to be used when calling a doctor.

"First.—When the doctor, in answer to your telephone call, says, 'This is Dr. Blank,' do not say, 'Is this Dr. Blank?' for the doctor has already told you it is Dr. Blank. Also do not say, 'Is this the doctor himself?' Just go ahead with the conversation.

"Second.—If the doctor does not personally answer the telephone, if possible give your message to the one who does answer. Most doctors' wives and office girls are capable of telling them that you want them to make a visit, or what time you will be at their office, etc. As a matter of fact, that is what the doctor has an attendant for, and if you give your message to the attendant when you can, you may save the doctor many miles of traveling.

"Third.—After the doctor leaves his office in the afternoon or evening, he is entitled to rest and recreation. Like other people, he should be allowed to forget his business after he gets home at night. But he cannot do this if he is continually called at his residence during the evening. So as far as possible, call the doctor at his office during office hours. (Emergency calls excepted. Think of the doctor.)

"Fourth.—Learn from your doctor what his regular calling hours are, and then plan your call so that your request is in his office before he starts on his rounds, thus saving him time, enabling him to serve all of his patients to the best advantage, and very likely he will be able to call upon you at an earlier time.

"You probably feel that the doctor should go whenever he is called. That is true, but the above suggestions, with more thoughtfulness on the part of his patients, will greatly assist the doctor in making his calls."

We might say, in passing, that the Southwestern Bell Telephone Company seems to

have better insight into the ethical and economic principle governing the practice of medicine than corporations usually have. For one thing, its method of employing physicians is significant. It selects medical service for its employees exactly on the basis that the head of a family selects his family physician. It is not a matter of securing the most service for the least money, or the greatest advantage for the company itself, but of getting adequate service for an adequate fee, in accordance with circumstances surrounding the individual case. This policy has been adopted by this great organization on its own initiative and without pressure from the medical profession. We might mention other matters of interest in this connection, but forbear at this time. We might well remember some of these things when we are aggravated and feel that the telephone is the biggest nuisance on earth; and for fear that some will think that we love the telephone company, perhaps we had better hang up!

A Change of Title in Our Physicians' Directory has just been made. For some time it has seemed clear that the designation "*X*-Ray and Electrotherapy" hardly covered the ground. There has been quite an evolution in radiology, including radium, *x*-ray and the light therapy, and nonmedical means of treating disease have been receiving more and more attention of late, very largely by those who lay stress on radiant therapy, if that is the proper way to say it. There has been a complication, also, in the difference between diagnosis and treatment. Appreciating these and other pertinent facts, we have been in correspondence and personal conference with numerous leaders in this field, and, to make a long story short, the designation "*X*-Ray and Electrotherapy" in the Physicians' Directory of the advertising pages of the JOURNAL will hereafter read, "Radiology and Physiotherapy."

In making this change, we are appreciative of the differences of opinion in regard to the wisdom of the combination. We believe, however, that we have met the views of the great majority of our confreres. To begin with, it is recognized that the word "radiology" pertains more to the *study* of *x*-ray, radium and the like, than it does to the *use* of any of these, and from that standpoint the terminology is bad. However, there seems to be no euphonious word properly descriptive, that we might use. If there is, we will most assuredly be pleased to know of it. Likewise, there is no direct connection between the use of radiant energy and any other physical means of treatment, laying aside the consideration of diagnosis at this time, but our position is that until the field has been more thoroughly worked out, and specialization become more definite, there seems to be no better place than this for the card of the physician who has to do with nonmedical means of treating disease. As in the case of that part of the directory devoted to "Skin, Genito-Urinary and Rectum," many phases of diagnosis and treatment are involved. When the number of cards justifies it, the specialists in the use of radium, or the specialists on the rectum, for instance, may be separated from their respective groups and placed in a division all their own. For the present, none of our specialties are really very clearly defined. Until they are, there must be more or less freedom in the rules that control in such matters. Incidentally, in making the designation above referred to, we conform to the terminology of the new scientific section on "Radiology and Physiotherapy."

A New A. M. A. Directory will be forthcoming shortly, according to information recently received from 535 North Dearborn Street, Chicago. Our members are daily receiving requests for verification of data, and it is to be hoped that the matter will not be neglected. It is to the advantage of the individual that these requests be promptly complied with. This is a dependable and useful book, and it is so because of the fact that the data included is as nearly correct as human agencies may be expected to get it. The time was when directories of this sort were not so particular. For a definite payment a physician could secure the insertion therein of almost any sort of data, within reason. This fact was known generally, and it was of no particular consequence whether the data relating to any individual was correct or not. It was understood that no one relied upon it, and that it was always checked through other channels. Things are different now. Great corporations, organizations of physicians, and even governments, rely upon the data found in this book, absolutely. This dependability has not been without price. The Directory has not only not proven profitable, but has proven very expensive. Its publication is continued because of the good it is doing. The separation of the sheep from the goats in the medical profession is worth while. It is to be hoped that there will be few of our sheep in the goat column, and that the number of near-goats will be largely decreased when this edition is ready to go to press. In this connection, it would not be

a bad idea to hasten the payment of dues, in order that the new Directory may show membership.

The Management of the A. M. A., which has been in temporary hands since the resignation of the heretofore general manager, Dr. George H. Simmons, following the Chicago session, has been finally decided upon. The temporary arrangements have been made permanent. Thus Dr. Olin West, formerly secretary-editor and state health officer in Tennessee, later assistant secretary of the A. M. A. and still later secretary of that the A. M. A. and still later secretary of that organization, becomes general manager, Dr. Morris Fishbein, for many years associated with Dr. Simmons in the editorial management of *The Journal,* becomes editor, and Mr. Will C. Braun, for many years advertising manager for the publications of the A. M. A., becomes business manager. Just what the division of responsibility and the plan of operation are, we do not know, but knowing the officials named as we do, we are prepared to assert that it makes no difference. Our great national organization is in safe and efficient hands. The gentlemen named have assumed large responsibilities. They will no doubt be tested by fire, as all who assume such tremendous burdens of this character must, and we hasten to assure them, individually and collectively, that they have the confidence and will have the support of the medical profession of Texas.

Reliable Advertising.—We have heard much of late years concerning "Truth in Advertising." If advertising is to be of value it must state its cause truthfully in every instance, otherwise the public will feel that the purchaser has still to beware, and that the art of purchase for that reason must be approached in doubt. That is not a good attitude from a psychological standpoint. That is exactly why experts in advertising have begun to stress the importance of truth therein. The limitations of straight out advertising, where the purchaser must always and invariably be on his guard, have been recognized, and the modern business man desires to engage in enterprises that have no limitations. Indeed, newspaper and magazine advertising, and even outdoor advertising, has reached such proportions that the advertising expert of a generation ago would stand astounded in its presence. The advance beyond the natural limitations of the game has been because of the idea that truth has been exacted in most instances, of those who would put out their propaganda in this manner. The fact of the case is, that the element of truth in the great bulk of our advertising matter is put there by the advertiser himself, and each advertiser has built up a sort of patronage, not only of his goods but of his propaganda. The advertisers have individually recognized the need of truth in advertising. Certain publications have, on the face of it, required truthfulness in advertising copy, but the fact remains that many of them have not taken steps to separate the sheep from the goats, and to deny the latter the right of pasturage.

There is a more important element in advertising than merely truth. The truth can be misused, and often is misused. *An advertisement should be reliable.* That means that it should be truthful, and say what it means and mean what it says.

We are moved to these remarks by a newspaper item just coming to our attention. It seems that a Texas doctor, reading the advertisement of a concern in Chicago, which proposed to buy and sell used equipment and the like, in a medical journal (probably so-called), turned in a valuable microscope to be sold. Thereafter he was not able to find out just what had been done with his property. He did not even get a reply to his numerous letters. He eventually found that this concern had gone into bankruptcy, and his microscope and the financial returns thereon were lost to him forever. Had the publication accepting this advertising been more particular, perhaps this loss would not have been incurred.

The JOURNAL will not accept advertising that reasonable investigation does not indicate is entirely reliable. Indeed, advertising contracts are frequently refused because of the difficulties in determining the element of reliability. We would rather lose this business than to take chances of imposing on our readers. We do not pose as being perfect in this particular, but whenever a reader of ours loses in dealing with an advertiser in the JOURNAL, he may be dead certain that every possible step had been taken to prevent anything of the sort. Rarely do we accept out-of-state advertising direct. We are not in a position to make investigations as we should make them, beyond the confines of our own State. For that reason the Coöperative Medical Advertising Bureau was organized. This concern represents all of the state journals, and has access to financial and moral estimates of reliability that we cannot command. If there is any criticism of any advertising carried in the JOURNAL, we will be pleased to know of it. We commend our advertisers to the favorable consideration of our readers, and our readers to the favor of our advertisers.

ORIGINAL ARTICLES

THE PROSTATE IN HEALTH AND DISEASE.*

BY

ALEXANDER A. BROWN, M. D.,
SAN ANTONIO, TEXAS.

In order to understand the structure and function of the prostate gland in health and the changes which it undergoes during the process of disease, it is necessary to begin by a brief consideration of its embryology.

EMBRYOLOGY.

Development commences at the third month of intrauterine life, the gland taking its origin from five groups of tubules which are at first solid epithelial outgrowths arising from the posterior urethra. These five tubule groups later form the five lobes of the prostate recognized by Lowsley[8], who designated them as anterior, posterior, right and left lateral, and middle lobes. During embryonic life the anterior lobe is as prominent as the others, but about the time of birth it usually atrophies. The posterior lobe, however, is always present, being separated from the lateral and middle lobes by a firm lamella of connective tissue in which the ejaculatory ducts are embedded. Although the two lateral lobes and the middle lobe develop separately, there is no actual division between them, so that in practice, especially so far as the surgeon is concerned, their separate origin is of no importance.

The subcervical group of tubules begins to develop at the fourth intrauterine month, and these become of considerable consequence, because of the fact that they grow back just under the mucosa of the urethra and within the sphincter and have been observed to become enlarged in more than half of all men who have passed the age of thirty. These tubules form tumors of several types on the floor of the vesical orifice, sometimes being singly or partially divided, and again being divided into three portions. This condition is attributed by Lowsley to the continual pressure exerted by the action of the so-called "Bell's muscles" during each act of urination.

ANATOMY.

The normal adult prostate has been described as "about the size of a horse-chestnut and of much the same shape, its upper border concave, convex toward the anus, bilobar (but not always symmetrically so) with a groove perpendicular to its long axis between these lobes where the tissues are markedly thinner, showing the course of the urethra through the organ; usually rounded from side to side, but not infrequently flattened like a truffle from its lateral abrupt borders toward its center; elastic, relatively smooth, only moderately sensitive to digital pressure and movable to a degree from side to side and from above downward."[10]

The greatest increase in the size of the gland takes place during the second decade of life, so that by the commencement of the third decade it has reached its maximum development[3]. The average length of the prostate during the first half of the first decade of life is 1.2 cm., the width 1.5 cm. and the average depth 0.9 cm. As might be expected, the greatest development occurs during the period of puberty. In ten of Lowsley's specimens obtained from autopsies on subjects more than fifteen years of age, the average length was 3.0 cm., that is, more than twice the average length of specimens obtained before the fifth year of life. There was an even greater increase in width and thickness.

In the sixth decade all the dimensions were found to be slightly increased over those observed in glands not long past the puberty period, but in subjects who had passed the age of sixty there was noticed a slight *decrease* in size, so that the prostate of extreme old age appears to have practically the same dimensions as that of the third decade of life, "being a little larger than those of the post-puberty period and somewhat smaller than those of the sixth decade." A knowledge of these age variations in size is of importance to any examiner, as an intelligent comparison of the patient's age and the size of his prostate, whether normal or abnormal for that age, will aid greatly in the prompt recognition of pathologic conditions.

The prostate is richly supplied with veins, and in specimens from aged subjects these vessels will be found large and tortuous. The majority of them are located on the anterior surface and lateral borders of the organ. Phleboliths or "vein stones" are a very common finding in this region; in half of the prostatic veins of Lowsley's autopsy subjects who had passed the age of thirty these vein stones were found; and some were present in every specimen from subjects over fifty years of age.

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 30, 1924.

8. Lowsley, O. S.: "The Gross Anatomy of the Human Prostate Gland," Surg., Gynec. and Obst., February 15, p. 183; "The Embryology of the Prostate and Its Relation to the Surgery of Obstructive Conditions," Amer. Jour. Surg., November, 1917; "Surgery and Surgical Pathology of the Human Prostate Gland," Trans. A. M. A., Sect. Genito-Urinary Diseases, 1918; "The Role of the Seminal Vesicles in Arthritis," N. Y. Med. Jour., May 4, 1921.

10. MacGowen, Granville: "Cancer of the Prostate," Jour. A. M. A., Vol. lxviii, p. 521, February 17, 1917.

3. Deaver, J. B.: Enlargement of The Prostate, 2nd Ed., P. Blakiston's Son & Co., Philadelphia, 1922.

PHYSIOLOGY.

The earlier anatomists classed the prostate among the urinary organs, but it is now established beyond question that its existence is essential to the virility of all male mammalia. If the prostate be removed, the activity of the testicles and seminal vesicles ceases, and it has been experimentally demonstrated that it produces an internal secretion which has a definite effect upon all the sexual organs.

The function of the prostate is the secretion of a fluid which acts as a sustainer and carrier medium for the spermatozoa[7]. Prostatic secretion is a "milky" fluid which gives off a penetrating odor and is alkaline or neutral to litmus paper. The composition of this fluid varies greatly under different conditions, and thus furnishes a valuable index in cases of prostatic disease, which a systematic examination will place at the disposal of the physician who has the affection under treatment.

SOURCE OF FOCAL INFECTION.

In health the prostate has a very appreciable influence upon some of the most important bodily functions, and, in the same manner, pathologic conditions in this organ are frequently responsible for disturbances in other parts of the body, often very remote from it. Such disturbances have been classified by McCrae[9] as either functional or organic; for example, as a result of inflammation of the verumontanum there may be a general nervous disturbance, or an infection of the prostate, such as that produced by the gonococcus, may induce a secondary arthritis. The connection between gonorrhea and so-called "rheumatism" has long been recognized, but that a gonococcic infection of the prostate may be responsible for joint disturbances is not so generally understood.

Prostatic and urethral lesions are frequently the origin of the sexual neurasthenia of male patients, which is very often a cause of sore vexation to the family physician, the neurologist and the urologist alike, and no such "nervous case" should ever be allowed to pass from observation until he has had a most searching and thorough examination of the prostatic region. It is never safe to rely upon the history alone, for in regard to details of his sexual life, even the most truthful and painstaking patient will frequently lead the examiner astray. There are numerous cases on record where a patient has undergone treatment for years without any lasting benefit, until, perhaps by accident, an inflammatory condition of the verumontanum or other local prostatic lesion was discovered and remedied, whereupon all the "nervous symptoms" promptly and permanently disappeared.

In the same way many obscure pains which have baffled all attempts to determine their cause, have vanished as if by magic when some lesion of the prostate has been located and removed. This is especially true of those pains referred to the legs which have for many decades masqueraded under the names of "sciatica" and "rheumatism." The pain produced by a chronic prostatitis is most often referred to the back, for which reason there have been many cases of "lumbago" which no local treatment is able to conquer, but once the prostatic condition is recognized and the proper therapy applied, the lumbago will quickly take its departure.

Even more serious is the confusion arising from those referred pains which simulate the pains induced by kidney disease, especially renal calculus. So closely is the "colic" which attends this condition mimicked by the referred pains of prostatitis that more than one patient has been subjected to operation for the removal of these supposed stones, only to find the kidney and ureter absolutely normal.

During the past few years a great deal of attention has been bestowed on the study of focal infection, and more recently it has been demonstrated that, in addition to the teeth, tonsils and nasal accessory sinuses, the prostate may be responsible for a number of obscure focal infections. Its importance in this regard is being more widely recognized every day. When a prostatitis is due to the presence of the gonococcus, the relationship is easily made out, but it is not so common to associate a prostatitis due to some other cause with the production of arthritis or some other pathologic condition in a remote part of the body. Indeed, the proof of this association of arthritis and prostatitis is, as McCrae says, not always easy of demonstration. If the prostate is the only possible source of infection this is a suggestive point, and in some cases the proof is strongly supported by treatment of the prostatic condition resulting in improvement in the arthritis. But it is evident that no case of arthritis in the male should be considered as having been properly investigated unless a rectal examination has been made, and the fresh prostatic fluid examined under a high-power lens for pus or other pathologic elements.

"THE SILENT PROSTATE."

Although the gravity of prostatic obstruction in the aged has long been realized by the medical profession, it is still very often diffi-

7. Judd, E. S.: "Diseases and Treatment of the Prostate Gland," Jour. Mich. Med. Soc., September, 1919.

9. McCrae, Thomas: "Remote Effects of Lesions of the Prostate and Deep Urethra," Jour. A. M. A., Vol. lxi, p. 477, August 16, 1913.

cult to convince even intelligent laymen of the need of early attention to the condition, and all too frequently when the patient reaches the surgeon his general health is so undermined that the measures necessary for his relief prove hazardous to life.[5] Prostatic disease is essentially an affection of the later years of life. "The activity of the gland is confined to adult life; during that time it is seldom subject to any pathologic processes requiring surgical treatment."[1] Tuberculosis may occasionally involve the prostate during the early adult years either as a primary focus, or secondary to a lesion in the epididymis or kidney. As Judd expresses it: "The prostate gland becomes of interest surgically at the period in which it is becoming physiologically inactive. At this time the pathologic condition which so commonly occurs in the gland and which is so peculiar to it begins to develop. This so-called adenomatous hypertrophy is probably present in almost all men past fifty-five years of age, although it produces symptoms only in persons in whom the enlargement interferes in some manner with the mechanism of urination." This author is convinced "after careful questioning and after studying the condition of men who come for examination for various complaints at this time of life, that most men who reach fifty-five to sixty years of age have some enlargement of the prostate. This is evidenced by frequency of urination, or by enlargement or change in the prostate which may be discovered on rectal examination."

It is usual to attribute prostatic hypertrophy to some infection which produces urgency, frequency and difficulty in urination.[6] Appearing at first only at intervals, these symptoms later become more frequent, until they are practically continuous. Complete retention, which may occur early in the course of the trouble, is often associated with some other condition, such as, "an infection in the form of a cold in the nasopharynx. Ordinarily the first symptoms are not at all serious and may cause little if any inconvenience. Before long, however, incomplete emptying of the bladder and an increasing amount of residual urine becomes evident." We are as yet, without definite knowledge of just how these secondary changes are brought about, but it is well understood that with the increase of symptoms and the amount of residual urine the disturbance in the functioning capacity of the kidneys increases. But the process is so gradual that the patient is seldom aware of his condition until he has well nigh reached the uremic stage. This emphasizes the importance of seeing these cases early, for "patients with uremia do not withstand operations well; the tendency to uremia must be overcome before any surgical procedure should be considered."

Cunningham[2] says:

"Prostatic obstruction occupies a peculiar place in surgery, inasmuch as the condition is the most common malady of advanced years requiring surgical intervention. Prostatic patients, therefore, represent a group of individuals past the prime of life in whom degenerative changes have taken place in all tissues to some degree, with the possibility of serious impairment of the functions of important organs as a frequent accompaniment to the more prominent features of derangement in the urinary system. The most common and dangerous are respiratory and cardiorenal. The renal changes, often with infection resulting in serious impairment of function, are by far the most important factors influencing the mortality in prostatic operations, yet accompanying impairment of all bodily functions, is not without its influence."

For this reason it is now very general to do a two-stage operation upon old and feeble patients, the suprapubic operation finding many advocates because of the better functional results it is thought to produce. Cunningham believes that suprapubic prostatectomy carries a relatively higher mortality with better average functional results, and for this reason thinks that only those patients who are the best surgical risks, should be subjected to it. For those not coming up to this standard there is less danger in the perineal operation, and in most cases the results will be satisfactory.

MALIGNANCY.

It has been estimated that about 25 per cent. of prostatic enlargement is malignant. The diagnosis is frequently attended by great difficulty, and several other conditions can easily be confused with it. Chronic abscess of the prostate, although appearing frequently in younger individuals—malignancy is exceptional in patients below the age of fifty—may often be mistaken for prostatic cancer[4], if it is deep-seated and attended by boring pain and general cachexia.

MacGowen's analysis of eight operative cases showed that extensive carcinomatous infiltration might exist without the presence of any symptoms commonly relied on to make a differential diagnosis between this condition and prostatic hypertrophy, such manifestations as vesical retention and irritation being common to both. But what has been said of hypertrophy applies equally well in

5. Gardner, J. A.: "The Silent Prostate," Jour. A. M. A., Vol. lxxi, p. 1636, November 16, 1918.

6. Hammer, A. W.: "A Few Thoughts On Prostatic Disease," Med. Rec., January 7, 1922.

1. Burrows, W. F., and Burrows, E. C.: "Prostatectomy," N. Y. Med. Jour., Sept. 5, 1923.

2. Cunningham, J. H., Jr.: "Essentials of Success in Prostatic Surgery," N. Y. Med. Jour., January 24, 1920; "The Problems of Prostatic Obstruction," Ann. Surg., May, 1917.

4. Eisenstaedt, J. S.: "Prostatic Abscess And Its Surgical Treatment," Jour. A. M. A., Vol. lxiii, p. 838, March 17, 1917.

cases of malignant growth. Early attention to the condition will lead to recognition and still give time for successful treatment, by surgery or other means. It is certainly the manifest duty of every member of our profession to urge upon the laity the necessity of all patients who have urinary troubles consulting competent physicians early, especially those individuals whose age would naturally suggest prostatic derangement.

ABSTRACT OF DISCUSSION.

Dr. H. McC. Johnson, San Antonio: The prostate has a delicate nerve supply and is subject to much abuse. I believe many chronic congestions of the prostate are not infections but disturbances of function. Much good results from proper treatment; the urologist and neurologist should work together in these cases. In prostatic cases look for local foci. Two classes of cases are seen, inflammatory in the young and hypertrophic in the old. I often wonder what becomes of these cases in the young. Many think the hypertrophy is the result of former infection; others claim various causes for the condition.

Dr. F. S. Schoonover, Fort Worth: Approximately 60 per cent. of the adult male population have or have had gonorrhoea at some time, and 85 per cent. of these cases have had what is known as a posterior infection, involving the posterior urethra and the prostate in practically every case.

The criticism of the treatment of these cases comes from the fact that the average doctor either does not recognize the involvement of the prostate gland or, if he does recognize it, he all too frequently fails to treat it. As a result, the responsibility for the poorly treated, the incompletely cured gonorrhoea, and the marked disability in later life due to prostatic inflammation devolves upon the doctor who first treated that patient. I wish to urge upon all who treat gonorrhoea to always examine the prostate and seminal vesicles, taking a smear of the secretion before any patient is dismissed as cured of his infection.

Inflamed prostates cause obstruction at the bladder neck in a few cases; these cases are not adenomatous hypertrophy of the gland but are inflammatory in character due to a contraction of the scarred tissue. This condition goes in the literature under the terms of "Contracture of the Bladder Neck" and "Bar Obstruction."

Dr. A. C. Gilbert, Dallas: Each of the many theories relative to the etiology of prostatic hyperplasia has its enthusiastic advocates. None of them, however, enjoys a very wide range of acceptance. Ciechanowski would explain this pathological change on the basis of an infection suggesting the probability of a previous Neisserian infection in every case of hypertrophied prostate. Dr. Edward L. Keys, Jr., established the fact very definitely that gonorrhoea had little, if any, part in the etiology of the so-called adenomatous prostate.

The treatment of prostatic obstruction depends upon the existing pathology and the condition of the patient. In patients in poor physical condition, the perineal route is the one of choice, regardless of the character of obstruction. For the cases in good physical condition, one should elect the operation that promises the best functional result. The large intravesical prostate associated with a dilated sphincter, should be removed by the suprapubic route (in two stages); the intraurethral prostatic adenoma, the fibrotic prostate and the cancerous prostate should be attacked from below. Obviously, no one operation is suitable for all types of prostatic disease. A mortality rate amounting to almost nil and greatly improved functional results, will be obtained if this line of procedure is followed.

Dr. Brown (closing): I merely intended to bring out the fact that it is important to consider the prostate in any chronic disease, especially when the etiology is obscure. Gonorrhoea, as Dr. Schoonover mentioned, even when treated by one of experience, leaves its mark on the prostate. It is therefore important to carefully apply the classic tests before discharging cases, and not to rely on one examination.

ISCHOCHYMIA.*

BY

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The above term is derived from two Greek words, meaning to detain and chyme, respectively, hence a delaying or detention of secretions and food particles in the stomach beyond that time at which they should be delivered into the small intestine, usually a period of from six to eight hours. Some authors have designated and described ischochymia as a separate and distinct disease entity. However, it probably would be more nearly correct to regard the condition as one resulting from any one of the several classes that in any way disturb the gastric motor function.

The method of making a positive diagnosis of ischochymia is not as a rule difficult; no great array of paraphernalia is necessary. In many instances an ordinary lavage tube and a quart of warm water will suffice, and yet it is not infrequent to see cases of the more pronounced type, resulting from pyloric stenosis with food stagation, allowed to continue over a period of several years, having been treated for most all of the more common digestive errors except the one in question. In the effort to come to a proper conclusion as to diagnosis in digestive complaints, attention has been constantly directed to discovering some secretory disturbance, at the door of which the blame can be laid; while as a matter of fact, in the great majority of instances there is some form of motor insufficiency; in short, too much importance is attached to secretory function of the stomach and decidedly too little study is given the motor function.

From a study of 3,000 cases of gastric disorders without appreciable anatomic lesions, Leon Meunier (*Presse Med.*, Paris, Sept. 23, 1922) concludes that the dyspepsia is due to insufficient evacuation of the stomach. It has been my personal experience that the majority of stomach cases complaining from what is commonly termed "water

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 1, 1924.

brash," pyrosis, acid regurgitation to intense vomiting of large amounts, if properly worked out, will show a delayed emptying time.

Both pathology and physiology confirm the importance of gastric evacuation. The stomach is primarily a reservoir, the function of which is to pour its contents little by little into the intestinal tract. If this function is in any way interfered with, a train of symptoms follow, which must be correctly interpreted in order that an intelligent mode of management may be adopted for their relief.

In the correct diagnosis of gastric disorders there must be three sets of data, the first and most important of which I believe always to be the clinical picture, made up of the symptoms as described by the patient; the second, the motility or degree of ischochymia, together with the size (not all dilated or enlarged stomachs are necessarily tardy in their emptying time, position and outline, as revealed by a careful x-ray study both from plates and fluoroscopically), and the third, a chemical analysis of the gastric juices with particular reference to the presence or absence of free hydrochloric acid.

It is possible to have a gastric malignancy involving a considerable area, or a well defined ulcer, and in both instances symptoms may be lacking until the motor function is disturbed. If, during the routine examination of the stomach, food particles in any appreciable amount should be discovered in the washings, after a period of from 7 to 8 hours following their ingestion, you may feel comparatively sure that there in an ischochymia, and proceed with confidence that further investigation will reveal the cause for this delay in the emptying time.

The presence of food retention or, in the more advanced cases, of food stagnation, as demonstrated either by the washings following the ordinarily used Riegel test dinner, or the residue remaining from a barium or bismuth meal and clearly seen from 6 to 7 hours later fluoroscopically, will in the vast majority of cases indicate the presence of one of three conditions: pylorospasm, gastric atony, or pyloric stenosis. While it is not the purpose of this paper to go into detail in reference to these more common causes for the condition known as ischochymia, yet I should like to mention a few points in reference to each.

Pylorospasm, usually a reflex functional disturbance, usually resulting from a hyperacid secretion, a chronic appendix, a diseased gall-bladder or a juxta pyloric ulcer, often shows a marked degree of ischochymia on one day and a normal emptying time upon another day, thus necessitating repeated retention tests to distinguish it from other conditions in which food delay occurs.

Gastric atony may be of two varieties, in one of which the ischochymia is present simply because the stomach is really incapable of ejecting its contents from the cavity in the proper time. In this type of atony, the etiology is variable and arises finally from a defect in the nutrition of the muscular layer or in the innervation; in the second variety of atony, the condition results from some form of obstruction at the pylorus, the stomach in its effort to empty finally exhausts its muscular tonicity. The passage of food in these atonic cases often exceeds the seven-hour limit, but rarely ever reaches that degree of delay spoken of as food stagnation.

The third cause, and the one in which the more pronounced condition of ischochymia is found, is pyloric stenosis, either of benign or malignant origin, the degree of ischochymia being altogether dependent on the degree of stenosis. Benign stenosis is usually the result of an inflammatory mass obstructing the pyloric ring, or of scar tissue remaining following the healing process of either a gastric or a duodenal ulcer. It is upon this first theory of obstruction, namely, an inflammatory mass, that Sippy has reported his brilliant results in the cure of pyloric stenosis by diet and rest, and by rendering the corrosive action of the gastric juices inert by a thorough alkalinization of the stomach juices, thus relieving the inflamed area from irritation, with a consequent gradual absorption of the inflammatory mass, resulting finally in a patent opening through which the food can pass normally and uninterruptedly into the duodenum.

Ischochymia as a result of scar tissue stenosis, can be relieved only by surgical measures, and it is in these cases that a properly performed gastrojejunostomy has given wonderful and lasting results. Malignancy that has progressed to the point of ischochymia, is usually beyond the pale of surgery. However, in certain selected cases, gastroenterostomy may prolong life and make the few remaining months of existence more endurable.

My object in this brief paper has been to direct your attention more closely, in the examination of gastric disturbances, to that function of the stomach which has to do with the time required to deliver its contents into the small intestine, knowing the normal limits of time food should remain in the stomach, and, having at your command fairly accurate means of determining whether or not this time limit has been exceeded, you are in much better position to continue your investigation and to ultimately make a correct diagnosis of

the causes leading up to ischochymia. Once you feel positive that there is a motor deficiency, you are in a position to correctly interpret the many disagreeable dyspeptic symptoms always following in the wake of those cases of delayed emptying time, and often you may, by most simple measures, entirely relieve all symptoms, and in many cases effect a complete cure.

ABSTRACT OF DISCUSSION.

Dr. F. D. Garrett, El Paso: Dr. Lowry has brought up an important subject. Ischochymia is a very common condition, as shown by the number of causes mentioned. When food is retained in the stomach over a normal length of time, a number of possibilities must be considered. The advent of the functional test meal has been a great help to me, in these cases. Experience with such cases gives us an idea of how much of the test meal we should get back after two hours. Ordinarily I get back about 50 c.c.; when I get back more than this, I look for pathology. The *x*-ray is a great help in these cases.

THE BACTERIOPHAGE IN INFECTIOUS DISEASES.*

BY

H. M. WINANS, A. B., M. D.,
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One of the most interesting phenomena in modern bacteriology which holds out the hope of specific treatment for various infections is the demonstration that Berkfeld filtrates of stool cultures and of cultures from other sources will kill and dissolve members of the colon-typhoid-dysentery group. This fact was perhaps first discovered by Twort,[1] although d'Herelle states that in 1896 Hankin called attention to the fact that water from the Ganges River is bacteriocidal and will kill the vibrio cholera quickly. Mark Twain in his "Following the Equator" also comments on the fact.

To Twort and d'Herelle belongs the credit for demonstrating that material from apparently degenerated colonies of staphylococcus passed through Berkfeld filter, would kill and dissolve other colonies, even when diluted one to a million. D'Herelle[2] found that a small portion of a stool from convalescent dysentery patients innoculated into broth and filtered through a Chamberlain filter would kill and dissolve broth or agar cultures of B. shigae. Later it was found that a substance capable of lysing bacteria could be developed from the stools of patients both normal and convalescent. It has been found possible to develop this primary activity to greatly increased power by repeated innoculation and filtration.

Although the early investigators thought that there was only one strain of the bacteriophage and that this could not be adapted to other organisms, McKinley[3] at Baylor Medical School showed in 1923 that it could be adapted to cocci, although it was not specific for any of them.

The way to the utilization of the bacteriophage clinically was paved by d'Herelle, who found that rabbits could be immunized against B. shigae by injection of small amounts of the substance, and that the fatal hemorrhagic septicemia of buffalo in Indo-China could be prevented by the injection of .25 c.c. of the bacteriolysant recovered from the stools of animals suffering from the disease. Kabeshima[4] demonstrated that the antidysentery bacteriophage could be given with safety to animals suffering from the disease. Davidson[5] failed to see any results in treating infants with bacillary dysentery with the substance, but Spence and McKinley, at the Southern Medical Association last year, reported a greatly lowered mortality in a larger number of cases from the use of the bacteriophage by mouth. Various workers have since reported the use of the substance by mouth, hypodermatically, and locally. There are, however, few reports on its use intravenously, and therefore the following cases may be of interest.

CASE REPORTS.

Case No. 1.—Mrs. B., aged 27 years, who had been under observation for four months, was admitted to Baylor Hospital, June 25, 1923, with a diagnosis of subacute bacterial endocarditis. She was very ill on admission, with a fast pulse and respiration rapid and labored. A loud systolic murmur replaced the first sound and the heart was moderately enlarged, as was the spleen. There were numerous petechiae scattered over the body and some tender areas in the finger tips and palm of the hand, probably due to septic emboli. The fever ranged from subnormal to 103 degrees F., with an occasional chill. The blood count showed red blood cells 2,316,000; leucocytes, 9,600, and polys 62 per cent. The urine contained a trace of albumin, but was otherwise negative. The Wassermann was negative and a blood culture negative.

Since all other measures, including transfusion, had failed to halt the downward course of the disease, it was decided to try the bacteriophage, which in this and all other cases reported was supplied by Dr. McKinley. The patient was first tested for protein sensitiveness by means of the skin test, and this being negative, she was given 5 c.c. intravenously.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 1, 1924.

1. Twort, F. W.: "An Investigation of the Nature of Ultra-Microscopic Viruses," Lancet, London, 1915, Vol. ii, p. 1241.

2. D'Herelle, F.: "Sur Un Microbe Invisible Antagoniste Des Bacilles Dysenteriques," Compt. Rend, Acad. d. Sc. Par., 1917, Vol. clxv, p. 373.

3. McKinley, E. B.: "Notes on d'Herelle's Phenomenon. Adaptation of Bacteriophage Antagonistic to Bacillus Dysenteriae and Other Bacilli to Various Cocci. Development of Polyvalent Bacteriolysant," Jour. of Lab. and Clin. Med., St. Louis, Vol. viii, p. 5, 1923.

4. Kabeshima, T.: "Experimental Research on Prophylactic Vaccination Against B. Shigae," Compt. Ren. Soc. de Biol. Par., 1919, Vol. clxix, p. 1061.

5. Davidson, W. C.: "Filtrable Substance Antagonistic to Dysentery and Other Organisms," Abstracts of Bacteriology, Baltimore, 1922, Vol. vi, p. 170.

There was no reaction and the temperature fell to normal. She felt considerable improvement subjectively. During the next thirty-six hours there was no elevation of temperature and the dose was repeated. There was again no reaction, and the patient showed improvement, as evidenced by better appetite and mental condition. The tender areas in the finger tips cleared up and there were no further signs of emboli. The bacteriophage was given daily for some time, but gradually a sensitiveness developed to a point where 0.5 c.c. gave alarming reactions. These reactions were also present when the substance was given hypodermatically, and even after a few doses by mouth she had a mild chill and elevation of temperature. The treatment was therefore discontinued. As the amount of the dose had to be reduced, the fever gradually returned, but did not reach the point it had in the beginning. Although transfusions never resulted in bringing the red cells up to normal, following the use of the bacteriophage the count rose to four million. For a period of about four months after treatment the patient seemed to be in an arrested stage of the disease with the fever rarely going above 99.2 degrees. Recently, there have been signs of increased activity, and it does not seem likely that she will survive beyond the average of two years, which is commonly allotted to this condition. She had, however, a period of comparative freedom from symptoms which was unusual, considering her condition when the treatment was begun.

Case No. 2.—Miss S., aged 19 years, was admitted to Baylor Hospital, July, 1923, on the sixth day of her illness with a diagnosis of typhoid fever. The blood culture was negative. The Widal was suggestive on admission and became positive on the ninth day, and the stool culture was positive for typhoid. She had a persistent fever of about 104 degrees F., with severe headache, anorexia, and malaise. Treatment with the bacteriophage was begun on the eleventh day. She received 2 c.c. of the bacteriophage intravenously daily and 20 c.c. by mouth every four hours. Improvement was marked at the end of 48 hours; the fever fell to 101 degrees F. and then to 99 degrees F.; the appetite improved, and the patient said she was getting well. At this time the supply of bacteriophage gave out and none could be obtained for five days. During this time the fever became higher each day and the patient's condition worse, until it was possible to institute the treatment again. At the end of four more days, the fever had again fallen to 99 degrees F., where it remained for a few days before leaving altogether. No conclusions can be drawn, but improvement coincided so closely with the administration of the bacteriolysant as to suggest that it was the agent.

Case No. 3.—C. B., aged 9 years, was taken with fever and chills, the physical findings were negative, except for pus in the urine, a culture of which showed colon bacilli. Ordinary measures, such as alkalies and urotropin with acid, failed to improve the condition at the end of a week. She was given 2 c.c. of bacteriophage intravenously followed by 1 c.c. intramuscularly the next two days. The fever disappeared at the end of two days and the urine was sterile by the fourth. She had a slight reaction from the intravenous dose, but none from the intramuscular ones, aside from some tenderness at the site of injection.

Case No. 4.—A. S., aged 5 years, had pyelitis following tonsillitis. She had a daily chill followed by fever of 105 degrees F. Her urine showed large numbers of pus cells. She improved well up to a certain point under the usual therapy, but at the end of three weeks was still having some fever, and pus cells in the urine. She was given 0.5 c.c. of bacteriophage intramuscularly, daily. Following a sharp reaction from the first dose, she had no further fever and the urine became clear in three days.

Case No. 5.—H. McD., aged 9 years, had a pyelitis probably due to catheterization during an attack of encephalitis. The urine showed a pure colon culture with large numbers of pus cells. She had intermittent chills with fever rising to 105 degrees F. She was given 1 c.c. of bacteriophage intravenously, every other day for two doses. There was marked improvement after the first dose. The parents objected to the treatment, however, and the kidney pelves were irrigated by a urologist. She had no further trouble. It is difficult to know which was the therapeutic agent.

Case No. 6.—Mrs. B., aged 27 years, following an operation for a pus appendix, had intermittent attacks of fever and severe pain in the right side, which would come on suddenly and be relieved just as quickly with the passage of large amounts of cloudy urine. During an attack, a mass could be felt in the kidney region on the right side. The urine showed large amounts of pus, with a culture positive for colon bacillus. It was thought that there was a ureteral obstruction due to adhesions following operation. She had had at least twenty cystoscopic treatments without relief. Her condition not being favorable for operation, it was decided to try the bacteriophage. She was given 5 c.c. intravenously every other day for two weeks, at the end of which time she became sensitive and had severe reactions. By this time, however, the pus had disappeared from the urine and she was having very little fever. She still had the attacks of pain in the side, which were relieved by passing large amounts of urine. Shortly before operation there was a transient attack of fever and some cells in the urine. Her condition had improved to the point where an operation was safe, and so Dr. Dunlap operated and found a mass of adhesions extending from the pelvis to the liver region and pulling the bladder up on the right. Following the release of these adhesions, the patient has regained her health and now has no trouble. The striking feature of the case was the apparent disposal of the infection in the face of the obstruction of the ureter.

A number of cases of bacillary dysentery were treated with the bacteriophage by mouth, with the same striking results reported by Spence and McKinley, but they will not be reported here.

From the few cases reported it is not possible to draw any conclusions. It seems that there is some hope that a new way of reaching infections may be developed. It might be argued that what results have been obtained have been due merely to a form of non-specific protein therapy. It is seen, however, that the best results were obtained when there was none of the reaction which is so characteristic of peptone or non-specific protein therapy. In fact, the main objection to the bacteriophage, at present, is that its use is hindered by the sensitization of the patients even when the usual precautions against anaphylaxis are observed.

It is encouraging for further work, however, that Arnold[6] has found that saline

6. Arnold, L.: "Bacteriophage Phenomena," Jour. Lab. and Clin. Med., August, 1923.

washings of the bacteriolytic colonies contain the substance as well as the agar of the plates themselves. It would seem that if some evidence of results may be obtained by the use of a relatively dilute solution of the bacteriophage, containing in addition peptone and various proteins, it may be hoped that by giving large amounts of saline solution of the lysogenic substance, free from peptone and proteins, much more striking and better results may be obtained. This will be attempted and reported later.

ABSTRACT OF DISCUSSION.

Dr. D. W. Carter, Dallas: I consider myself fortunate in having observed some of these cases with Dr. Winans. The case of endocarditis was a definitely pronounced one and, certainly, duration and symptoms in the case have been modified. The work of Drs. Spence and McKinley has been striking. Most of the literature that has been written on this subject is more or less on experimental lines. The Bacteriophage is something that causes dissolution of the bacteria, and in that sense it is a new substance. Four hypotheses may be considered in explanation of this dissolving action: (1) The enzymes may be derived from the animal organism which is attacked by the given bacteria. The enzymes would then be the result of a defensive reaction on the part of the organism; (2) the enzymes may come from intestinal bacteria as the result of a microbic antagonism, such as the bacteriolytic action of filtrates of old cultures of B. pyocyaneus; (3) the enzymes may be secreted by the bacterium which undergoes the lysis. These enzymes would therefore be autolysins; and (4) the enzymes may be secreted by an ultramicroscopic virus, which is a parasite of bacteria. This is the hypothesis held in the first publication by D'Herelle.

SOME OBSERVATIONS REGARDING PARANASAL SINUS CASES.*

BY

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In 1921, I presented a paper to this section under the title of "Some Interesting Phases of the Nasal Question," illustrated with lantern slides of many patients, demonstrating many of the phases of the nasal question under discussion. I shall not repeat in this paper the details of cases, but shall review the subject of that paper, and will likely reiterate some of the views therein expressed, but with added clinical experience. I hope to more correctly interpret the nasal pathology heretofore discussed. The rapidly favorable changes in certain eye lesions, following the treatment of a nasal condition, have been most difficult for me to reconcile. These changes have been difficult to explain along the lines of infection, and I had concluded that these changes were the result of fifth nerve irritation of a reflex character, and that the restored nervous impulses which followed an operation, properly performed as to parts involved, brought about correct nutrition in the area which seemed to be disturbed.

Of course, I am familiar with the historical view that sympathetic ophthalmia was by many believed to be the result of sympathetic irritation. It required many experiments and still more speculative reasoning to bring us to the present point of view, which comparison I make, as being suggestive that when once the view of sympathetic irritation was discarded a better thought was formulated. For the same reason, further observation and greater clinical resources have led me to wonder if all the apparent vasomotor disturbances and other evidences of fifth nerve irritation are not, after all, to be explained wholly by the absorption of poisons, which find an affinity somewhere along the nerve distribution and which only requires that the pathological change (very slight in some instances, more marked in others) be found and corrected, in order to bring about the happy results which so frequently follow nasal operations.

Then, too, I have been wondering if, in our section of the country, a larger number of interesting eye conditions from paranasal sinuses were not due to reactions in the development of the individual in a climate where exposure is general—outdoor life being the rule—and where wind, dust and sunshine are plentiful. Looking into the question more closely, from a study of my own cases, a very large percentage of these interesting cases seem to have come from West Texas, and to have been subjected to just such climatic influences. In fact, there are a very few out of a large series, who come to me from a climate that is more moist than the western section of the State. At this point I wish to repeat some pathological observations which occurred in my paper on this subject, read before the Southern Medical Association in 1922:

"In a large number of extremely interesting eye cases in which the disease is traceable to the nose, I have found that the septum is finally one of the chief factors in producing a condition not only involving itself (its periosteum and boggy mucous membrane), but the adjoining structures as well, in chronic inflammatory changes which become the active sources of certain nerve irritations that finally lead to these ocular manifestations. Much depends upon the position and the length of the sphenoidal sinuses.

"They extend laterally into the roots of the great wings and downward into the bases of the pterygoid processes; however, the extent to which either sinus may extend into the pterygoid process varies in different skulls. In many cases, one of the other sinuses may pass down into the pterygoid process sufficiently deep to cause a medial bulging of

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, April 30, 1924.

the medial pterygoid plate toward the posterior end of the septum upon the posterior nasal opening. The anterior wall of either sinus may be pushed forward into the posterior ethmoidal air cells, thereby causing a medial bulging of the posterior end of the middle turbinate, which lessens the space in that nasal cavity. Occasionally, the sphenoidal sinuses communicate with the posterior ethmoidal cells by openings which vary in size and shape. The septum spreads out, as it were, making up the anterior wall, and in this way the posterior end of the middle turbinal is often compromised. When inflamed, it materially adds pressure in all directions, to the point of pressure necrosis, as well as blocking drainage for air or fluids.

"The remote expression as we find it in the eye, classified as a disease, for example, fascicular keratitis, is definitely an expression of certain localities involved, notably a chronic inflammation of the bony wall of the ethmoid without secretion, a jamming of the turbinal against the septum high up, with frequently an erosion of the mucosa, as well as absorption of the bone of the septum, due to pressure necrosis, and chronic osteitis of the bone of the septum. I have relieved cases of fascicular keratitis when the pathology was just as described; and I have observed a similar nasal pathology in many cases where the eye symptoms varied as to the form of keratitis, and where, in addition thereto, at times, follicular changes occurred in the mucous membrane of the eye."

At this time I can substantiate the above statements. The posterior ethmoidal cells seem to be the source of trouble more frequently than any other one sinus. The ethmoidal cells are nearly always filled with a membrane that can be described as a beginning polypoid degeneration, sometimes far advanced, filling large cells, and unquestionably bringing about changes and becoming a focal point of absorption. While no cultures of microörganisms have been obtained from this membrane, it is subject to inflammatory reactions, marked in some people and in others hardly noticeable, hence the absence of secretion, which has been so puzzling and so difficult to understand.

The ethmoidal cavities are the result of ethmoidal cells that are small in early life, but are constantly growing, and this eventually brings the lateral wall up against the turbinate, which is then pressed against the septum, with final blockage the natural result. If an individual with incidental septal deviation also has large sphenoidal sinuses, he is more likely to suffer from the early consequences that this blockage brings about. A very similar pathology in the nose brings various symptoms to the surface in different individuals. An individual with large frontal sinuses, which have been the result of the early and rapid growth of the ethmoidal cells, can be said to have reached the starting point of the so-called vacuum headaches. This condition being easily recognized, is frequently remedied by removing the middle turbinate. Soon, however, the symptoms return on account of the growth of these small anterior cells which block the way; and any such history, with an *x*-ray which shows a large sinus, should be sufficient justification for an exenteration of the anterior ethmoidal cells, and if possible, the establishment of an opening into the frontal sinus, with the least amount of traumatism, going no further than to remove the oedematous membrane occupying the anterior ethmoidal cells which frequently lead into the frontal sinuses.

Then again, the above described condition may exist, plus the closure of the sphenoidal sinus due to septal outgrowth associated with a large middle turbinal and with increased thickening of the bony structures making up the wall and cells in this posterior ethmoidal area, which gives you a basis for a pain other than the frontal headache. The changes which take place in the eye are recognized as keratitis, uveitis, iritis, ulcer, pannus, optic neuritis, etc.

FIG. 1. Showing patient described under Case No. 1.
FIG. 2. Showing condition of eyelids in Case No. 2.

The sphenoidal sinus is infrequently involved compared with the others, but when it is involved, then we have more likely an optic neuritis with definite nerve changes.

I am showing pictures of two cases, in which operations were performed with marvelously rapid and apparently definite results obtained. These two patients have been under my observation recently, and their respective histories are briefly as follows:

Case No. 1.—E. O., had a very definite pannus, dense exudate and hypertrophy of the lymphoid follicles of the conjunctiva, resembling trachoma. This child was reoperated, January 11, 1924, and the left ethmoidal cells and the sphenoidal sinuses were thoroughly cleaned of granulation tissue and overhanging bone, from which there was no secretion, but a rapid resolution was established and the child's eye saved.

Case No. 2.—C. S., had an uncomfortable photophobia and pain with a commencing keratitis, when

an investigation demonstrated that the sphenoidal sinuses had closed, due to an increasing growth of the bony wall. Under cocaine anesthesia, a currette was carried into the cavity and the wall broken down, and all her symptoms disappeared.

I mention these two cases to lay stress upon the persistency necessary to carry out the measures which will relieve many of the cases which you recognize as of nasal origin. Any evidence of recurrence is likely to dissuade you from your first and correct impression and make you pursue a non-active effort in correcting the cause. I know of nothing which requires as clean and complete work as paranasal surgery. And all this is for the purpose of correcting the cause that your diagnostic ability might suggest to you; and yet your therapeutic measures are likely to cause you to change your views.

The mortality from complete paranasal sinus operations is less than the mortality

FIG. 3. This patient's eyes cleared up entirely for 2 or 3 years, but finally the sphenoidal sinus became blocked, with a return of her old trouble. This trouble immediately cleared up following another operation upon the sphenoid sinuses.

FIG. 4. This little patient's eyes cleared up and remained all right for 2 or 3 years, when it became necessary to remove some granulation tissue from the posterior ethmoid and sphenoid sinus. Following this, the case rapidly cleared up again.

from appendectomy operations, take them as they run in each class. The professional view is to the contrary. We might say in explanation that the operation for appendicitis is more frequently performed and by a larger number of surgeons, whereas the paranasal sinus operations are limited to a smaller group of surgeons, and the thorough and complete operations are limited to a still smaller number of surgeons doing this special work. Paranasal sinus operations will stand the closest scrutiny, and will compare favorably with the best work done; for example, the operations for appendicitis.

However, one's technique should lead him to enlarge his field of operations within the nose by doing a submucous operation, which I suggested some years ago, and then completing his nasal operation in such a manner that there is not a cell or a vestige of infected material left. Avoid the use of the curette, except in the most limited and careful manner, biting sharply the tissues that are to be removed, cleansing the cavity thoroughly of all blood by the use of a suction apparatus. The patient should be under general anesthesia, with the throat protected and with no occasion for blood to get into the lungs. Follow a routine which makes it possible to do your best work with the least amount of interference.

We have not had as a sequel a single case of pneumonia or lung abscess, or a death that could be classified as from the anesthetic employed. As we average about 120 operations of this kind per year, I feel that we should make this statement in the interest of the routine that we follow in my clinic.

ABSTRACT OF DISCUSSION.

Dr. J. M. Woodson, Temple: Dr. Cary's paper needs no commendation, because we always know his papers are helpful and are based on valuable experience. We are apt to become one-sided on the question of drainage. Dr. Souchon, who was for a long time a teacher at Tulane, said, "Drainage is four-fifths of surgery." Focal infection is assuming a large place in all of our pathology. We do not always find infection in immediate contact with the organ we are dealing with. The cases related closely resemble cases I have had, and similar results have followed. We must not forget that many eye diseases are closely associated with sinus diseases. I do not know how the man doing eye work exclusively can handle his eye cases of nasal origin unless he has someone closely associated with him who is doing nasal work.

Dr. W. D. Jones, Dallas: One point that might be raised in the type of cases which Dr. Cary has discussed, is whether the ethmoiditis, or whatever condition is found, is of specific origin. Those cases with a history of an initial lesion and with a positive Wassermann reaction, can very easily be cured by heroic antisyphilitic treatment.

Dr. H. L. Warwick, Fort Worth: The average *x*-ray technicians do not make sinus pictures which are suitable. My office assistant can produce a wonderful *x*-ray picture in 10 minutes; this is more satisfactory service than the *x*-ray man usually gives us. The apparatus with which to do this is not expensive and can be installed in any office, and your assistant can soon be trained so that you can have an *x*-ray reading almost immediately. I have all my sinus and ear cases *x*-rayed in my office as a part of the examination.

Dr. Cary (closing): I am exceedingly interested in this subject, and yet I am trying not to ride a hobby. I make every effort to study the cases from every angle, so as to avoid reaching a conclusion which is erroneous. A doctor should use all the laboratory and other means at his command before doing operative work. I have a case in the hospital now that illustrates the point that I erred on the side of conservatism and could have cleared the case up when I first saw her. This patient had chorioretinitis; her vision was involved, even beyond the area ordinarily to be expected from the amount of chorioretinitis that she had. There was no pain in or around the eye. Her eye improved following the use of medicine and her vision was apparently

helped. She came back a few days ago, not only on account of inability to see light, but because of a very marked pain, so severe that her doctor brought her to me to have her eye removed. I recognized at this time (a year after I had first seen her) that she had an involvment of her ethmoidal cells, without secretion.

Immediately following exenteration of the ethmoidal cells, there was a complete cessation of the pain, her light perception came back, and in two or three days her vision had returned consistent with the scotoma, a loss in the field of vision due to the chorioretinitis. The young lady suffered for several months, the pain growing more intense in and back of the eye, but she did not come to me during this time.

Sometimes there are dehiscences in the bone, with the optic nerve so close to the pathology that there is bound to be trouble sooner or later. In trying to be careful, I delayed doing the necessary thing in this case as early as it should have been done. This, however, would not have resulted in the long delay if she had come to me again for study. I have many of these cases, but I only reported the above case to bring out the care which I take in all of the cases before any operative procedure is decided upon.

INTRALARYNGEAL GROWTHS, WITH REPORT OF CASES.*

BY

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SAN ANTONIO, TEXAS.

Until a few years ago, preoperative diagnosis of intralaryngeal growths were infrequently made because of the obstacles attending the removal of sections for microscopical study. These specimens were occasionally taken by the more expert laryngologists, but in nearly every instance no diagnosis was made until the tumor was first removed. The symptomatology as set down in the old text-books was very misleading, as a number of conditions of a benign nature gave the same manifestations as were experienced by the patient who had carcinoma of the larynx. For instance, a hoarseness becoming progressively worse and amounting to complete aphonia, was at one time thought to be pathognomonic of cancer; it is now known to accompany several conditions of a benign character. A number of symptoms which were classified as being indicative of cancer are not of any help in making early diagnosis, because they present themselves only after the cancer becomes inoperable. Among these symptoms may be mentioned dysphagia, which comes on only after the cancer involves surrounding structures; cachexia, which is seen only in the last stages of the disease, and involvement of the cervical glands, which presents itself only after the patient's fate is sealed.

The necessity for the early laboratory diagnosis of growths within the larynx for the purpose of differentiating the benign tumors from incipient cancer is evident. Sarcoma of the larynx, in its early stages, cannot be differentiated from papilloma by inspection. Later, sarcoma may simulate myxoma, or, after the tumor assumes a greater size, may take on the exact appearance of a fibroma with a broad base. Recently, I have seen the report of a case of submucous cancer which was pronounced a cystoma by a man of national reputation. The literature abounds with cases of cancer of the larynx which have been diagnosed as angioma, scleroma, etc.

In the diagnosis of cancer, especially cancer involving the vestibule of the larynx, examination by indirect laryngoscopy is a difficult and unsatisfactory process. In overcoming the obstacles associated with the old-fashioned laryngeal mirror, direct laryngoscopy is a great step forward. When the cancer is extrinsic, the epiglottis is so redundant, because of edema or the derangement of its innervation, that it completely obscures a portion of the larynx. In addition to this, there is usually associated with the condition an exceedingly hypersensitive fauces which, even under cocaine anesthesia, cannot be controlled, and which will often make the examination a lamentable failure. When the laryngoscopic spatula is used in diagnosis, any amount of retching is not an obstacle, as the examiner is working through an instrument which completely overrides the tongue. The results, under this method, are so easily obtained that it is difficult for one who has not practiced it to appreciate the ease with which it is performed.

The removal of a section of an intralaryngeal growth for laboratory study is only practicable when done under direct laryngoscopy, it having been accomplished by the indirect method by but few men. The latter method is a trying procedure and more often ends in failure than success. By direct laryngoscopy, it is a simple matter to introduce a spatula and remove a section under cocaine anesthesia. The procedure is not as trying to the patient as the old method is, and is not accompanied by any pain.

Within the last year I have removed two growths from the larynx, which were positively carcinomatous in appearance but which, under the miscroscope, proved to be benign. Had sections not previously been taken from these growths and examined, the patients would necessarily have lost their larynxes. The objection has been raised that removing a section of a cancer will predispose to its rapid growth. While this may be

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true, no cancer within the larynx should be allowed to remain after a diagnosis is made.

In securing the specimen from within the larynx by the aid of the directly illuminated laryngoscope, a fairly large piece of the growth may be bitten off with the cutting forceps, and this is accomplished with very little difficulty by one accustomed to direct laryngoscopic work. The specimen should be taken as deep as it is possible, and preferably with the free edges of the tumor included. A malignant growth partially removed is almost certain to be followed by renewed activity or possibly by extension to surrounding structures. It is a wise precaution, then, to have an understanding with the patient that should malignancy be demonstrated he will at once submit to an operation for the partial or complete removal of his larynx.

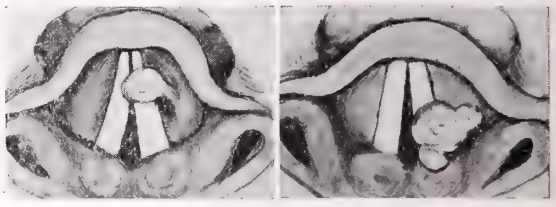
When a section is found to be non-malignant, the intruding growth may, in almost every instance, be removed by direct suspension laryngoscopy. The old operation, which consisted of instrumentation by indirect laryngoscopy, was a most discouraging procedure because of the retching and vomiting which accompanied the operation and because of the blood and mucus obscuring the field. By direct laryngoscopy, the procedure is so much simplified that it can be done in every case, under general anesthesia, with complete impunity. The crane or gallows of Killian, is an unnecessary appliance, as the same results may be obtained by the use of the hand spatula, which is so easily introduced and so readily held by an assistant that the crane becomes unwieldy and cumbersome in comparison.

While it may be considered radical by some, the complete removal of the larynx is an operation which should at least be considered when intralaryngeal malignancy is demonstrated by the study of a section. The laryngofissure, or thyrotomy, an operation which has been much lauded of late, will not in any way fill the requirements, in my opinion. A removal of only the portions involved is a most unsafe procedure. In other departments of surgery, no one would attempt to cut within one-fourth or one-half inch of a cancer, but would get as far away from the field of malignancy as possible. It seems to me that the only practical thing to be done when a cancer is found within the larynx, is to remove the whole larynx rather than to temporize with the condition.

The following cases which I am reporting in this paper will emphasize the value of preoperative specimens for laboratory study.

CASE REPORTS.

Case No. 1.—This patient came to me in May, 1922, exhibiting a hoarseness which had been in existence for several months and was gradually becoming more marked. There was slight dyspnea during exertion. She had no involvement of the cervical glands and her general condition seemed to be very good. An examination of the larynx by the direct method revealed a growth on the left laryngeal wall apparently attached to the vocal cord. Under cocaine anesthesia and by direct laryngoscopy, the tumor was touched with a blunt probe and found to be attached by a solid base to the laryngeal wall and not involving the vocal cord as we first believed. The patient consented to the removal of the growth, which was accordingly done by direct laryngoscopy

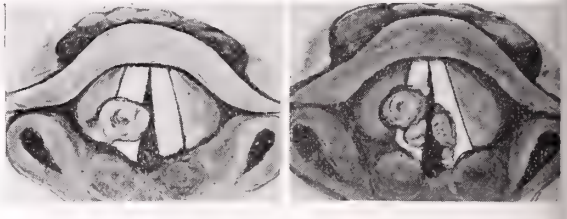


Left: FIG. 1.—Laryngeal tumor, Case No. 1, as represented in the laryngeal mirror.
Right: FIG. 2.—Trilobular mass removed from larynx in Case No. 2.

under cocaine anesthesia. The specimen was examined and was found to be a myxofibroma. Recovery was prompt and the voice was immediately regained. This case is of interest because its represents an intralaryngeal type of neoplasm difficult to differentiate. Without the aid from the laboratory, this patient might have lost her larynx.

Case No. 2.—A physician, 62 years old, came to me about two months ago. He had lost his voice two years before and a year later began to have severe attacks of dyspnea verging on suffocation. An examination revealed three distinct nodules in the upper part of the larynx, which had their origin below the left arytenoid. I took off a piece of one of these growths for the laboratory, and the section was examined by Drs. Scott and Moore and found to be adenoma. Later, we removed the tumors under general anesthesia. In his last letter this patient stated that the dyspnea had disappeared, but the voice, though improved, was not yet normal.

Case No. 3.—A man, 63 years old, who had suffered for months with attacks of hoarseness, was first seen



Left: FIG. 3.—Appearance of the larynx in Case No. 3, as seen by indirect laryngoscopy.
Right: FIG. 4.—Recurrence of cancer in Case No. 4, after simple removal. Laryngectomy had been refused.

by me in the winter of 1919. An operation for removal of the tumor for examination was advised and refused by the patient upon the ground that he would not submit to two operations. A mass could be plainly seen upon the right vocal cord, extending very slightly upward and backward upon the wall of the larynx. The condition was so evidently malig-

nant that I at once advised an immediate removal of the larynx, which was also refused by the patient when he learned what effect it would have upon his voice. He, however, consented to a partial laryngectomy, which was done soon afterward. An incision was made in the larynx, in the median line, and the tumor with the cord and the underlying laryngeal wall was removed and the specimen submitted to the pathologist. The report was that the tumor was a round cell carcinoma. The growth returned within eighteen months.

Case No. 4.—A woman, about 45 years of age, came to me, stating that she had had an operation within the larynx and that she wished me to treat her throat. I immediately wrote to her surgeon in the East, and he replied that he had recently re-

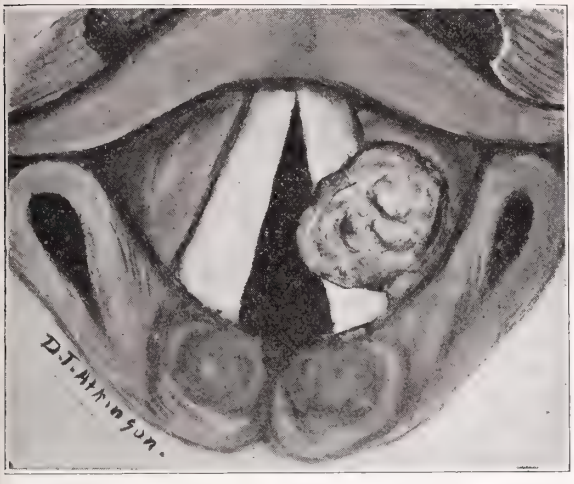


FIG. 5.—Appearance of larynx in Case No. 5, showing location of cancerous growth.

moved what proved to be a malignant growth from within the patient's larynx, the operation having been followed by the intralaryngeal application of radium. His communication bore the suggestion that a reapplication of radium should be made, if the condition seemed to be re-establishing itself. I have never seen a case that demanded a more immediate laryngectomy than did this one. After temporizing with the case for a time and after having every suggestion of operation combatted, I advised a return to her former surgeon, which suggestion was complied with. Since her last visit to my office she is said to have received varied and sundry treatment in several northern and eastern cities, where she succumbed to the inevitable several months later. The fatal termination of this case indicates the fallacy of therapeutic measures alone, in cases of malignancy of the larynx. Had this patient's larynx been removed at the time the laboratory diagnosis was made, it is very probable that her life would have been prolonged for months, or perhaps for years.

Case No. 5.—During the summer of 1922, I examined this patient and, finding a nodule on her left vocal cord, advised its removal for examination. This suggestion was not complied with, and I lost sight of her until April, 1923, at which time she returned with a very great increase in the size of the tumor and with extensions to nearly all of the lateral wall of the larynx. There was much dyspnea manifested in this case, often—especially at night—verging on suffocation. The Wassermann was negative and there was no history of lues.

After much hesitation the patient consented to have a section removed for examination. The specimen was prepared by Dr. J. M. Moore, the Santa Rosa Hospital pathologist, and was also examined by Dr. B. F. Stout with the agreed diagnosis of carcinoma. Later, the patient consented to a complete laryngectomy. After a stormy convalescence she recovered completely. Since then she has gained flesh, and with the exception of the absence of her larynx, seems to be in perfect health. The prognosis in this case is good, as there was no involvement of the cervical glands and the cancer was confined within the limits of the larynx.

A good anesthetist, capable of administering rectal anesthesia, is indispensable in intralaryngeal work. My first laryngeal surgery was done under anesthesia administered per ora or through tracheal tubes. When laryngectomy is being performed, this character of anesthesia is especially impracticable because of the fact that the anesthetist is in the surgeon's way and because of a greater likelihood of the patient aspirating blood. I do not think that anyone who once uses a rectal anesthetic in laryngeal surgery will ever revert to the old method of anesthesia.

ABSTRACT OF DISCUSSION.

Dr. Louis Daily, Houston: Dr. Atkinson spoke about McKenzie's hook. This is used to make out the extent of the laryngeal growth. If it has extended into the oesophagus, you pull the larynx forward and examine the posterior wall. The Haslinger and Seifert instruments are greatly superior to the Jackson Laryngoscope, because they give a larger exposure and leave both hands free. You should judge what to do not by the size of the tumor, but by the extent of the involvement, which is

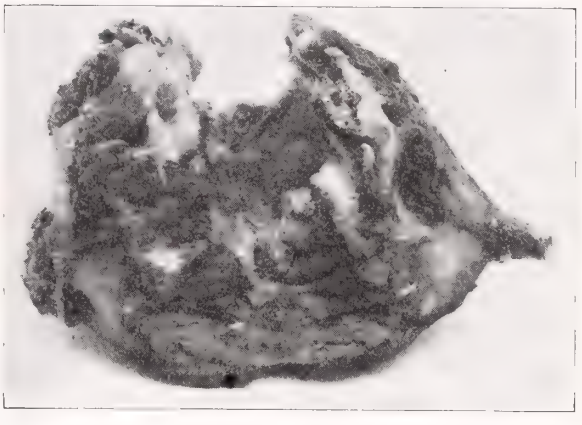


FIG. 6.—Larynx removed from Case No. 5. Nodular mass representing carcinoma may be plainly made out.

determined by the fixation of the cords and arytenoids. In intrinsic growths laryngofissure gives good results. A total laryngectomy is a very formidable operation. In Vienna, local anesthesia is used entirely and the operation, including a thorough dissection of the glands, lasts from four to six hours. The percentage of fatalities has been very great, but postoperative pneumonia has been diminished by applying constant suction to the wound and removing the secretions as they form.

We used radium needles in one case in which the patient refused operation. At first the growth disappeared entirely and we thought the case cured, but it returned and involved the whole larynx. We finally had to do a tracheotomy, and the patient lived for about two years.

Dr. J. H. Foster, Houston: We should not depend too implicitly on the pathological report of tissue removed from the larynx. Wright, the greatest pathologist on the nose and throat, used to frankly refuse to pass on the malignancy of specimens without going into the clinical history of the case. I do not believe sections should be removed from tumors of the larynx without being prepared to go ahead very quickly with the operation for their removal. In cases of intrinsic cancer of the larynx without fixation of the arytenoids, thyrotomy is certainly preferable. The operation is simple. There is practically no mortality, and the results are excellent.

Dr. R. H. T. Mann, Texarkana: Dr. Lynch's modification of Killian's suspension laryngoscope is superior to this instrument, for if you are giving the patient a general anesthetic, you have a larger field in which to work. You can introduce the tube into the throat, and give the anesthetic by the pump method just as in a tonsil operation; and by lowering the head a little and using the suction apparatus, you can get rid of the blood and mucus and have no interference from this source. By this method you have just about as much working space as you have in using the ordinary mouth gag.

FIG. 7.—Appearance of patient, in Case No. 5, six weeks after removal of the larynx. After a period of twenty months this patient shows no indication of recurrence of cancer.

The doctor has given a report of the removal of a tumor, in which he states that the patient is getting along very well, and I hope that these happy results will continue. If I understood him correctly, he said that he snared this growth off. We do the same thing with polypi and expect a recurrence. Another instrument which he did not mention is the electric cautery, which is very useful in removing growths where malignancy is to be expected. Another advantage of the electric cautery is that it prevents bleeding at the time of operation. Of course, the electric cautery cannot be used with ether anesthesia.

Dr. Atkinson (closing): Dr. Foster has suggested that a microscopical examination of a pathologic specimen from within the larynx may be misleading. I agree with the doctor that here, as elsewhere, the microscope may and does mislead us in tissue work. It is unquestionable, however, that a laboratory report of a section is the most dependable evidence we can get in determining the nature of a neoplasm of the larynx. If we decide to depend solely upon the microscopical picture as presented by the larynx, and upon the clinical symptoms present, we are on dangerous ground. Unless the discovery of a growth within the larynx, with which may be associated a slight amblyphonia, is followed with a section under the microscope, this discovery amounts to very little. The growth might be anything from a simple papilloma to the most malignant type of cancer. The course indicated in these cases, it seems to me, is the early determination of the nature of the growth by the removal of a section for study. If we are to get anywhere in the treatment of cancer of the larynx, this must be done before later symptoms, known to be pathognomonic of the disease, appear and make the case a hopeless risk from a surgical standpoint.

I think it is a fact conceded by all, that McKenty has done more work upon the malignant larynx than any other surgeon in America. Any one who has reviewed McKenty's recent articles will remember that he now unquestionably advocates the complete extirpation of the larynx, in cases where malignancy is demonstrated, regardless of whether the condition is extrinsic or intrinsic. Possibly Beck, of Chicago, stands next to McKenty in the number of cancer cases treated, and though he has often been quoted as an advocate of partial laryngectomies in selected cases, he seems to have recently changed his views. I draw this conclusion from his remarks before the American Academy of Ophthalmology and Otolaryngology, in 1923, when, in the discussion of Dr. Lewis' paper advocating the complete operation, after reviewing and giving statistics of a large number of his cases, he sums up with these words: "Formerly, I have been closely attached to the men who advocate laryngectomy, splitting of the larynx, etc., and I am sure that had I done laryngectomies on more cases, instead of those other things, I could show a greater number of lives saved."

It goes without saying that before a specimen is taken from the larynx, an agreement must be had with the patient that, should malignancy be demonstrated, he will submit to whatever surgical interference is necessary. Otherwise, the findings of the laboratory will be of no importance and the steps necessary to obtaining the specimen may increase the growth of the cancer, thus shortening the patient's life.

YOU OUGHT TO KNOW THESE CANCER FACTS.

Here are five cancer axioms that everybody should learn by heart:

1. After the age of 35, one out of every eight women and one out of every eleven men die of cancer.
2. Cancer is at first local and permanently curable by operation.
3. Cancer nearly always gives some indication of its presence while in this stage.
4. In at least four-fifths of cases cancer begins in regions accessible to surgery.
5. The majority of cancer deaths are due to delay and are unnecessary.

"It is unfortunate that occasionally physicians immersed in general practice are not fully conversant with what may be accomplished by modern surgery," says Dr. David Cheever of Harvard medical school. "They may consider a case hopeless while it is still operable. In so serious a condition as cancer, neither the patient nor his physician should be satisfied with a single opinion."—*Hygeia.*

TREATMENT OF ARSPHENAMIN DERMATITIS WITH SODIUM THIOSULFATE.*

BY

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HOUSTON, TEXAS.

Dermatitis from the arsenical preparations employed in the treatment of syphilis, is fortunately uncommon; fortunately, because the severer forms are not only distressing and of long duration, but are even dangerous to life, and the milder forms are of serious import to the patient also, since they may prevent the use of the arsphenamins and thus rob the therapeutic attack of some of its vigor.

INCIDENCE AND CLASSIFICATION.

Skin reactions from arsphenamin (this term is used in this paper as a generic one for all the arsenical preparations employed in the treatment of syphilis) occur, on the average, once in two thousand injections. In 47,000 injections, Moore and Keidel[1] had twenty-one cutaneous disturbances. Stokes[2] reported thirty-eight skin eruptions in 44,000 injections at the Mayo Clinic. Stokes believes focal or other infections heighten the susceptibility to arsphenamin dermatitis, while Miller[3] is of the opinion that seborrheic dermatitis predisposes to or is an indication of a predisposition to the disorder.

A simple and satisfactory classification for arsphenamin dermatoses is their division into mild and severe reactions. Mild reactions are urticarial, herpetic and erythematous in type. They are fugacious and do not contraindicate further arsenical therapy. Severe reactions are of a macular, papular, vesicular, or exfoliative nature. To these may be added simple pruritus and stomatitis. The skin rashes of this type are usually of prolonged duration, may be fatal, and contraindicate entirely, or indicate the utmost caution in the further employment of the arsenicals. Experience with sodium thiosulfate in the treatment of severe arsphenamin dermatitis suggests, however, that the latter statement will be revised.

TREATMENT.

Ravaut,[4] in 1920, first suggested the employment of sodium thiosulfate in arsenical eruptions. McBride and Dennie,[5] in 1922, reported very favorable results with it, and so have Hoffman and Schreus,[6] and Bugg and Folkoff,[7] and Miller.[3] Besides the formal papers of these authors, Pusey, Senear, Mitchell, Ormsby, and others, have in clinical meetings, mentioned individual cases benefitted by its employment. The concensus of opinion is that sodium thiosulfate is a decidedly valuable, if not a specific remedy in arsphenamin eruptions, and that its introduction changes the prognosis of the disease as well as past conceptions of the employment of arsphenamin in patients known to be hypersensitive to the drug. It remains to be proven, however, that the combined employment of arsphenamin and sodium thiosulfate does not rob the former of its value as a spirocheticide. Only extensive studies can definitely settle this question.

The drug is used in ascending doses, beginning with 0.3 gms. and increasing to a maximum dose of 1.8 gms., if necessary. It is given intravenously by the syringe method, dissolved in from 10 to 20 c.c. of sterile distilled water, the smaller doses being given at intervals of 24 hours, and the larger every 48 hours. It may be given by mouth in doses of 15 gms. dissolved in 450 c.c. of water, morning and evening, but it is more efficacious when given intravenously.

The use of sodium thiosulfate in arsphenamin eruptions is based upon the fact that sulphur combines with arsenic to form an insoluble, non-toxic bisulphid which, in time, is eliminated. Sodium thiosulfate is employed in preference to other sulphur compounds, because it is freely soluble in water and causes no untoward effects in doses up to 2 gms. intravenously.

Previous to its introduction, the treatment of arsphenamin dermatitis was unsatisfactory. The local remedies employed relieved cutaneous symptoms to a certain extent without having any appreciable influence on the course of the disease, while the general measures were vaguely employed with the idea of assisting the liver and kidneys to cope with the poisonous effects of the drug, and to aid in its elimination. In England, however, intramine was employed to a certain extent as a direct chemical antidote, and with some success despite the drawbacks attending its administration. In this connection, it is interesting to recall that intramine is an ammoniosulphur compound, and that its sulphur content probably explains its efficacy in arsphenamin dermatitis.

The following cases embrace my own experience with sodium thiosulfate, and are

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 1, 1924.

1. Moore, J. E., and Keidel, A.: Arch. Int. Med., Vol. xxvii, p. 716, June, 1921.
2. Stokes, J. H., and Cathcart, E. P.: Arch. Dermat. and Syph., Vol. vii, p. 14, January, 1923.
3. Miller, H. E.: Calif. State Jour. Med., Vol. xi, p. 473, November, 1923.
4. Ravaut, P.: Presse Med., Vol. xxviii, p. 73, January 28, 1920.
5. McBride, W. L., and Dennie, C. C.: Arch. Dermat. and Syph., Vol. vii, p. 83, January, 1923.
6. Hoffman, E., and Schreus, H. T.: Murchen. Med. Wchnschr., Vol. lxx, p. 1481, December 14, 1923.
7. Bugg, C. R., and Folkoff, C.: Bull. Johns Hopkins Hosp., Vol. xxxv, p. 76, March, 1924.

recorded as a contribution to a subject which is still recent enough to possess moot points that may be clarified by the clinical observations of individual observers.

CASE REPORTS.

Case No. 1.—B., aged 39 years, applied to the Houston Venereal Disease Clinic for treatment of gonorrheal urethritis. He had a four plus Wassermann reaction and was given arsphenamin 0.4 gms. and mercury salicylate .065 gms., at weekly intervals. Several days after the fourth arsphenamin injection, he developed an itching vesicular eruption which spread rapidly. When admitted to the hospital, two weeks later, he had a severe universal exfoliative dermatitis, accompanied by weakness, inappetence, fever up to 102 degrees F., and albuminuria without casts. One week after his admittance, and three weeks after the onset of the dermatitis, intravenous administrations of sodium thiosulfate were begun. The first dose was 0.2 gms., increased rapidly to a maximum 1.6 gms. In all, nine injections were given, one every other day. Amelioration of the skin condition and constitutional symptoms was noted after the third injection. Improvement proceeded rapidly, and in about three weeks the skin had returned to a normal state. The patient was discharged as well, four weeks after his admittance to the hospital.

Case No. 2.—A negress, aged 31 years, had been treated at the V. D. Clinic for latent syphilis, having received eight weekly arsphenamin injections. Within a day or so after the last injection, she noticed itching and a scaly eruption which affected a considerable portion of the cutaneous surface. When admitted to the hospital two weeks after the onset of the eruption, she presented a diffuse papular and squamous dermatitis, occurring in large irregularly shaped patches. The intervening skin was normal in appearance. The eruption itched intensely. There was moderate loss of weight, weakness, and albuminuria with many hyaline casts.

Sodium thiosulfate injections were begun (19 days after the onset of the dermatitis) and two doses, one of 0.3 gms. and one of 0.45 gms., administered, when through a mistake the injections were stopped, but an amelioration of the itching was obtained. Ten days later, treatment was resumed and six doses, on alternate days, were given. The amount administered ranged from 0.6 gms. to 1.6 gms. A week after the commencement of this course, the skin was free of eruption and the itching had ceased. The patient was discharged as well, one month after admittance to the hospital.

Case No. 3.—Miss C., aged 27 years, had a tertiary nodular syphilid of the face. A general examination and routine laboratory tests revealed no abnormalties. Three neoarsphenamin injections, the first 0.45 gms. and subsequent ones of 0.6 gms. each, were administered, following which she developed itching of the skin and a widespread maculopapular rash. Nausea and vomiting accompanied the eruption. Within a few hours after the appearance of the skin manifestations she was given sodium thiosulpate 0.5 gms. intravenously, followed in 24 hours by a similar injection. At the same time 10 gms. of the drug were given by mouth night and morning. The eruption disappeared three days after its onset.

Case No. 4.—Mr. G., aged 56 years, had a trichomonas intestinalis infestation and had been given three injections of neoarsphenamin, at 5 day intervals. The last injection was followed by chilly sensations and a slight rise in temperature. About 36 hours after the last injection, an itching eruption appeared on the back and rapidly involved a large part of the cutaneous surface. It was maculopapular in character with exudative areas on the legs. It was a severe disturbance and gave the impression that it might eventuate in a dermatitis exfoliative. He was seen by me 24 hours after the onset of the rash, and sodium thiosulfate 0.5 gms. intravenously, was administered immediately. The same drug was given by mouth in 10 gm. doses twice a day during the treatment. Sodium thiosulfate intravenously in 0.75 and 1.0 gm. doses was given for seven days. After the third dose the itching began to subside, and after the fifth dose a definite involution of the eruption commenced, which was accompanied by moderate desquamation. He was discharged as cured fifteen days after the beginning of this treatment.

Case No. 5.—Mrs. F., aged 40 years, had been under treatment for two years for tertiary syphilis. All manifestations of the disease, except a strongly positive Wassermann reaction, had disappeared. After the sixth injection of arsphenamin in the first course, she developed severe itching and a widespread macular rash. Several months later one dose of neoarsphenamin, 0.3 gms., brought on the same symptoms. Treatment was then continued with mercurial inunctions and mercury cyanide intravenously. In January, 1924, Wassermann reactions by two laboratories were four plus. It was decided to give neoarsphenamin counteracted by sodium thiosulfate, if necessary. The first injection of neoarsphenamin (0.45 gms.) was followed in 24 hours by itching, a widespread erythematous rash, and prostration. Sodium thiosulfate was then administered in 0.75 gm. and 15 gm. doses, intravenously and by mouth respectively, as outlined above. The eruption and subjective symptoms disappeared in three days. A week after the first neoarsphenamin injection, she was given another, and this was continued for eight doses, each of 0.45 gms. Sodium thiosulfate was administered with each dose in the following manner. Twelve hours and three hours before each neoarsphenamin injection, she took 15 gms. of sodium thiosulfate by mouth, and four hours after the neoarsphenamin injection she was given 0.75 gms. of sodium thiosulfate, intravenously.

After the second dose of neoarsphenamin there was a slight burning and itching of the skin but no rash. After the third and subsequent neoarsphenamin injections there were no skin manifestations, but she developed nausea, vomiting, and diarrhea, which lasted for 24 hours after each injection. After the fourth dose of neoarsphenamin, no intravenous injections of sodium thiosulfate were given, and the last dose of neoarsphenamin was given without any sodium thiosulfate administration, but no skin manifestations occurred. The patient had developed a resistance to arsphenamin dermal effects, but had gastro-intestinal symptoms that were severe enough to preclude further use of an arsenical preparation. At the end of this treatment the Wassermann reaction was still four plus.

DISCUSSION OF CASES.

From the personal experience recorded in the above cases, as well as from observations that have appeared in the literature, it is evident that sodium thiosulfate is the most valuable drug thus far employed in the treatment of arsenical eruptions. It is presumed that it acts as a direct chemical antidote, though some objection has been offered to this concept.

Cases Nos. 1, 2 and 4 of my series were classed as severe reactions; Case No. 3 as a

mild type. Case No. 1 was the most severe, but despite the lapse of three weeks between the onset of the exfoliative dermatitis and the first injection of sodium thiosulfate, the patient responded promptly to the drug. In Case No. 2, nineteen days had elapsed from the onset of the dermatitis to the first administration of the drug. In Case No. 4, only three days intervened before the employment of sodium thiosulfate, and this probably saved the patient from a severe eruption. In this case, only one week's treatment (seven doses) were required for cure. Case No. 5 is in many respects the most interesting of the series. In this instance, a susceptibility to neoarsphenamin was proven, and it was then demonstrated that the administration of sodium thiosulfate in conjunction with neoarsphenamin prevented a cutaneous outbreak, though—and I think this is interesting—it did not prevent vomiting and other severe gastro-intestinal symptoms. It is also worthy of note that the last dose of neoarsphenamin was given without recourse to the buffer action of sodium thiosulfate, and was not followed by a dermal disturbance.

CONCLUSIONS.

1. Sodium thiosulfate has a decidedly beneficial effect upon arsphenamin eruptions.
2. It probably acts as a chemical antidote.
3. While it is desirable to employ it as early as possible, it may be used with success several weeks after the onset of the skin reaction.
4. In individuals susceptible to arsphenamin, in whom it is desired to use arsenical therapy, sodium thiosulfate may be used simultaneously to prevent cutaneous manifestations. It is unknown, however, whether or not this procedure robs arsphenamin of its spirocheticidal value.

ABSTRACT OF DISCUSSION.

Dr. J. B. Shelmire, Dallas: This excellent paper of Dr. Michael should command the attention of every practicing physician, for at any time any of us may be called upon to treat a case of arsphenamine dermatitis. The good results in his case confirm previous reports. Not all of us have had the privilege of reading the papers of Drs. McBride and Dennie published in *The Archives of Dermatology and Syphilology,* early last year. Since then, a sufficient number of cases have been reported to prove that sodium thiosulphate intravenously, is a distinct advance in the treatment of this type of dermatitis.

Dr. Michael has told you that the sodium thiosulphate combines with the arsenic to form an insoluble, non-toxic bisulphide. This is an opportune time to call attention to the fact that this drug when combined with the salts of mercury and lead form non-toxic substances, and that it has been used with gratifying results in the treatment of acute mercurial and lead poisoning. Remember that in an emergency, where the facilities are not at hand to use the intravenous method, the drug may be given by mouth. Dr. Michael is to be congratulated for the presentation of this paper, and the profession is to be congratulated in having this subject brought to their attention.

Dr. Michael (closing): Sodium thiosulphate is the best drug we have for the treatment of arsenical dermatitis. So far as my experience goes with it in the treatment of mercurial stomatitis, it is not as effective as in arsphenamine eruptions. In mercurial stomatitis there is the added factor of secondary bacterial invasion, and this probably explains its failure. In a conversation with Dr. W. A. Pusey a few minutes ago, he told me that sodium thiosulphate is of benefit in exfoliative dermatitis of non-specific origin, such as the Wilson-Brocq or Hebra types. This is of decided interest, and I pass it on as Dr. Pusey's contribution to this subject.

THE TEXAS FOOD, DRUG AND ANTI-NARCOTIC LAWS.*

BY

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The Texas Food and Drug Law is an act to prohibit and prevent adulteration, fraud and deception, and misbranding in the manufacture and sale of articles of food and drugs, and provides penalties for the violation of the act. It provides for the appointment of a Dairy and Food Commissioner, and defines his powers and duties; it also provides for the appointment of inspectors, chemists and other assistants.

This law, in its present form, was passed by the Thirty-second Texas Legislature, as an amendment to the Blanton Pure Food Law, and went into effect June 11, 1911. Under the terms of a bill enacted by the Thirty-seventh Texas Legislature, the Food, Dairy and Drug Commission was consolidated with the State Health Department as the Food and Drug Division; the commissionership was abolished, and all the powers and duties of the commissioner transferred to the State Health Officer.

The work of the Food and Drug Division is under the immediate supervision of a director, and is coördinated with that of the other directors of divisions of the State Health Department, and like them, this director is appointed by the State Health Officer. The activities of the former separate commission were directed chiefly toward those sections of the Food and Drug Law against fraudulent adulteration of foods and drugs, and misbranding.

The personnel of the Food, Dairy and Drug Commission during the last year it functioned as a separate department, consisted of 12 inspectors, or field men, 4 chamists and bacteriologists and 4 clerks and stenographers. The present force, charged with the enforcement of the same Food and

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, San Antonio, April 30, 1924.

Drug Law, and other duties resulting from their connection with the Health Department, consists of 5 inspectors or field men, 3 chemists and bacteriologists, and one stenographer.

If the Texas Food and Drug Law is viewed solely from the standpoint of regulations and restrictions, it may be divided into eight sections. These eight sections cover the following items: Section 1, definition of the terms "food" and "drug;" Section 2, conditions under which foods and drugs are deemed to be adulterated; Section 3, conditions under which the term "misbranded" shall apply in the case of drugs, and in the case of foods; Section 4, enumeration of certain specific substances, the addition of which to foods is prohibited; Section 5, a standard for baking powder; Section 6, definite regulations relative to the sale of impure, or adulterated milk; Section 17, forbids the issuance by any employee of the department, of a certificate as to the purity or excellence of any article of food or drug; Section 23, requires the registration and payment of a $1.00 fee, annually, by all food and drug manufacturers and importers in Texas.

If attention is directed particularly to adulteration in the case of food, it is found that there are six conditions, or circumstances, under which food is deemed to be adulterated, as follows:

"*Section 2-C-1.*—If any substance has been mixed and packed with it so as to reduce, or lower, or injuriously affect its quality or strength, as for example, addition of water to whole milk, giving what is ordinarily called 'watered milk;' addition of saccharin to bottled beverages, thereby lowering the food value of the beverage. The food value is due to sugar and the addition of saccharin, which has no food value even though it is intensely sweet, lowers the food value by decreasing the amount of sugar necessary to properly sweeten the beverage.

"*Section 2-C-2.*—If any substance has been substituted wholly or in part for the article, as for example, addition of ground pecan shells, or various cereals to coffee; addition of acetic acid, or any of the distilled vinegars, to apple cider vinegar; addition of glucose to strained honey; addition of cotton seed oil to lard.

"*Section 2-C-3.*—If any valuable constituent of the article has been wholly or in part abstracted, or if the product be below that standard of quality, quantity, strength or purity represented to the purchaser or consumer, as for example, skimming, or separating whole milk into cream and skim milk or 'Blue John,' and selling the skim milk for whole milk.

"*Section 2-C-4.*—If it be mixed, colored or powdered, coated or stained in a manner whereby damage or inferiority is concealed, as for example, mixing saccharin with bottled beverages which gives the sweet taste characteristic of sugar and thereby conceals the inferiority due to the presence of the saccharin which has no food value; addition of coloring matter to unripe, or even spoiled tomatoes in the preparation of catsup, or puree, thereby concealing the inferior, or damaged, condition of the raw material.

"*Section 2-C-5.*—If it contains any added poisonous or other added deleterious ingredient which may render such article injurious to health, as for example, addition of formaldehyde to milk as a preservative; addition of copper sulphate to intensify the green color of canned peas.

"*Section 2-C-6.*—If it consists in whole or in part of a filthy, decomposed or putrid animal or vegetable substance, or any portion of an animal or vegetable unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter. This covers all questions relative to the sale, or offering for sale, of tainted, sour or spoiled meat, fish, poultry, fruits and vegetables. It also applies to weevil or rat infested cereals, flour, candies and dried fruits."

It is seen from this enumeration that every phase of this question of fraudulent adulteration of food from the economic standpoint, is covered by the law. These are not matters, strictly speaking, belonging to preventive medicine, or public health. In fact, aside from two sentences in Section 2, and Section 6, relative to the sale of impure milk, there is nothing in the Food and Drug Law which comes within the field of public health administration.

Attention is directed for a few moments to a closer study of those portions of the law having a more definite relationship to the subject of public health. In Section 2-C-6, it is stated that an article of food is deemed to be adulterated, "if it consists in whole or in part of a filthy * * * animal or vegetable substance." "For the purpose of this act, the term filthy shall be deemed to apply to food not securely protected from flies, dust, dirt, and as far as may be necessary by all reasonable means from all foreign or injurious contaminations."

The latter part of this section defining the term "filthy," is the law under which all complaints are written relative to the exposure of fruit, vegetables, candies and bakery goods on the sidewalks, in front of a business establishment, or inside of a building which is either not properly screened, or is not equipped with sufficient fans, or proper display cases. Contamination due to such exposure, or lack of protection, is the most prevalent form of adulteration of foods.

During the year ending December 31, 1923, over 70,000 pounds of foodstuffs unfit for human food, was destroyed, and 70 convictions secured for violations of this section of the Food and Drug Law. It may be said in this connection, that during the same period, 82 convictions were secured for violations of the health certificate law, and 71 convictions for adulterations and misbranding, a total of 223 convictions and fines assessed amounting to $6,700.00. These convictions were secured upon evidence obtained during the process of inspecting 4,800 food establishments in 400

towns, and the analysis of 2,250 official samples submitted by the inspectors to the staff chemists and bacteriologists of the Food and Drug Division.

Section 6 states:

"It shall be unlawful for any person, either by himself or agent, to sell or expose for sale or exchange any unwholesome, watered, adulterated or impure milk or swill milk or colostrum, or milk from cows kept upon garbage, swill or any other substance in a state of putrefaction or other deleterious substances, or from cows kept in connection with any family in which there are infection diseases, or from sick or diseased cows."

This section offers some protection against adulterated milk, but emphasizes more particularly the economic loss involved in fraudulent adulteration.

From the standpoint of its relation to public health work, the Food and Drug Law is deficient in several particulars. The production of safe milk can be secured only under laws making provision for definite sanitary conditions surrounding the source of supply, the storage, transportation and sale of milk, and requiring proper certification, at short intervals, as to the freedom from communicable diseases of all dairy operatives. Such a law presupposes an adequate force of trained inspectors. The same statement holds true with regard to the meat industry, to bakeries, ice cream factories, restaurant and hotel kitchens, dining cars, bottling plants, groceries, canning and preserving plants, candy factories; in short, to any and all places where food of any kind is manufactured or prepared, packed, stored, transported, sold or served.

Referring again to some of the activities of this division during the year ending December 31, 1923, in which 223 convictions were secured: Of this number, 152 convictions were for conditions dangerous to public health. In other words, two-thirds of the complaints came under the two short sections of the present law which represent all the protection available under the law, from the public health standpoint. An inadequate number of inspectors, enforcing a law, which affords inadequate health protection, secured 152 convictions, not to mention numerous corrections of defective sanitary conditions secured by moral suasion.

Enact a law providing adequate health protection in the way of proper sanitary regulations governing food establishments. Make provision for an adequate number of inspectors to make frequent inspections under the provisions of such a law, and then the Food and Drug Law will function in its proper relationship to matters of public health administration.

The Director of the Food and Drug Division of the State Health Department has prepared a rough draft of a law setting forth such regulations governing sanitary conditions surrounding food establishments, as experience has shown to be necessary to properly safeguard the health, not only of the consumers of such foods, but also of the food handlers themselves.

It will be considered a privilege to have suggestions and criticisms on this law from members of the Legislative Committee of the State Medical Association of Texas, to the end that the law, in its final form, may embody all the desirable features which the combined thought of the medical profession and the experience of chemists and inspectors can furnish.

A brief word relative to the Texas Anti-Narcotic Law. A study of this act shows its marked similarity to the Federal Act regulating traffic in narcotics. It would be like "carrying coals to Newcastle" for one to speak to members of the medical profession of the needs for the strict enforcement of such a law. The Food and Drug Division of the State Health Department is charged with the enforcement of this law. Unlike the Food and Drug Law, the Anti-Narcotic Law is a public health measure through and through. However, no provision has been made for the funds necessary for the enforcement of the law. Constructive criticism here must needs be directed, not to changes in the law, but to educational propaganda to show the necessity for enforcing such a law. In the event of success in your contemplated Educational Campaign, funds are sure to be made available adequate in amount to meet this serious need.

OVARIAN THERAPY.

Emil Novak, Baltimore (*Journal A. M. A.*, December 20, 1924), emphasizes the fact that, rational as ovarian therapy appears to be in some conditions, the results are rarely striking and often nil to the level-headed observer. It cannot be assumed that a commercial extract can replace the normal ovarian secretion in the patient's body, or, for that matter, that it originally contains any of the active hormones of the ovary. Here lies the crux of the whole problem, whose solution will depend in large measure on the work of the biochemist. Until this day, the physician who uses ovarian therapy should keep his feet on the ground and not let himself be carried away by the exaggerated claims of those who have something to sell or the ill advised and premature reports of honest but deluded professional colleagues who have not yet learned the dangers lurking in the "post hoc propter hoc" method of reasoning. As I once heard a wise man say, "Ought we to assume, if the administration of cascara relieves constipation, that the constipated individual had been a victim of hypocascarism?" There can be little question as to the future importance of ovarian therapy —as regards its present importance there is considerable room for discussion.

ABLATIO PLACENTAE, WITH REPORT OF ILLUSTRATIVE CASES.*

BY

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Antepartum hemorrhage due to the premature separation of the normally implanted placenta, was first recognized by Louisa Bourgeois in 1603, but to Rigby, in 1775, is due the credit of the first satisfactory differential diagnosis between antepartum hemorrhage due to placenta previa and premature separation of the normally implanted placenta, and of designating the hemorrhage due to premature separation as accidental, in contradistinction to the unavoidable hemorrhage associated with the former condition.

During the years that have followed, there have been many cases reported, dealing with frank or concealed hemorrhage. The type of hemorrhage is termed by some "abruptio placentae" or "utero-placental apoplexy;" by R. W. Holmes of Chicago, "ablatio placentae," and by many, "premature separation of the normally implanted placenta." The condition is one to which too little attention has been given by obstetricians; its frequency has been greatly underestimated; its mortality has been judged too high, and its treatment is still a moot question.

INCIDENCE.

The frequency of premature separation of the normally implanted placenta cannot be expressed in satisfactory figures. One of the early writers, from observation of a series of his own cases, has stated that antepartum hemorrhage of this type exceeds that type caused by placenta previa, by a ratio of 17 to 14.

P. Appleton has prepared the following table:

Hospitals	Labors	Separations	Ratio
Sloans Maternity	5,900	57	1-104
Dublin Rotunda	6,453	70	1-92
N. Y. Lying-In	10,000	0	0
Chicago Lying-In (Dispensary)	15,000	43	1-348
Chicago Lying-In Hospital	3,600	6	1-600
Providence Lying-In	914	7	1-130

The entire absence of placental separations in the statistics of the New York Lying-In Hospital covering 10,000 cases, may be ascribed to errors in diagnosis. Dr. Williams states that in the last 2,000 cases delivered in his service at the Johns Hopkins Hospital prior to July, 1915, 17 cases of premature separation were noted, but only one example of concealed hemorrhage occurred in a series of 15,000 labors.

Holmes says that it occurs as a pathological entity in one out of every 200 cases, and clinically, in one out of every 500 cases. We are of the opinion that many cases of partial separation with concealed hemorrhage are missed, owing to careless observation, and that many of the cases that are diagnosed as partial placenta previa, because of the bleeding at or near term, or during labor, are really premature separation.

ETIOLOGY.

The primary cause of ablatio placentae is not certainly known, but the following causes have been mentioned—traumatism, violent emotions, and excessive dilatation of the uterus due to hydramnios or twin pregnancy. When the surface of the uterus is suddenly considerably reduced after the birth of one twin or evacuation of the amniotic fluid, the placenta cannot contract in the same way as the uterus and becomes separated; shortness of the cord represents another mechanical cause, but it is generally believed that the importance of this factor has been greatly magnified. Essen-Moeller found that traction on the cord will rupture it before it will loosen the placenta. It is probable that every obstetrician can remember one or more cases in which the cord was short enough to cause symptoms of fetal distress during labor, as evidenced by the irregularity of the heart rate, although the traction on the cord failed to detach the placenta, so for practical purposes a short cord may be disregarded as an etiologic factor.

Nephritis, toxemia, eclampsia, syphilis and endometritis have also been invoked as etiologic factors. Holmes, in his article in 1901, declared that endometritis was the most fruitful cause. Multiparity would appear to be a predisposing cause, only 19.2 per cent of the cases collected by the above writer having occurred in primiparae. I am quite sure that pituitary extract administered late in labor is a cause of premature separation. Under such circumstances the baby is born with the placenta trailing along almost immediately behind. The infant is delivered in beginning asphyxia and the physician congratulates himself that he administered the pituitrin at the opportune moment, when, as a matter of fact, the infant's condition is due to the partial separation of the placenta plus the shutting off of the blood supply due to the severe contractions induced by the drug.

The writer has recently delivered a typical case, a premature separation of a normally inserted placenta marginata. Premature separation seemed to have taken place in this case, especially at the margin of the placenta. The relation between placental separation and placenta marginata does not seem to

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924. From the Department of Obstetrics and Gynecology, Medical Department, University of Texas.

have been clearly brought out in the literature so far, although several authors have noted the coincidence of the two conditions and some believe that there is a relation between the two facts. It is suggested, therefore, that placenta marginata be classed as a predisposing condition causing premature separation of the placenta.

In the outline of the causes given above, syphilis, nephritis and toxemias of pregnancy may be classed under the heading of "Toxic Type," and as such will be discussed under the cases reported.

Considered from an etiologic standpoint, I believe with Williamson that there are only two types of premature placental separation, one of which is the "traumatic type." In this group are included those cases which give a definite history of trauma, as well as those in which there is placental separation without demonstrable cause. The other group, which is by far the larger and more important group, is nearly always associated with toxemias, and so may be termed the "toxic type."

TIME OF OCCURRENCE.

Polak states that the majority of the accidents have occurred in women between 25 and 35 years of age, who had had an antepartum history of toxemia. Willson, in 59 cases of ablatio placentae (the youngest of these patients was 17 and the oldest 42 years of age), finds the average age of the patients 32.2 years.

Ablatio placentae may occur during the latter months of pregnancy or at the time of labor. In 59 cases (Willson), the accidental hemorrhage occurred as follows: Five cases in the seventh month; 10 cases in the eighth month; 21 cases in the ninth month; 2 cases in the tenth month, and 1 case at term. Of these cases 26.8 per cent were primiparae and 72.2 per cent were multiparae. In 51 cases, the urine showed signs of nephritis, usually associated with toxemia.

The placenta may be partially or wholly separated. The point and degree of separation have considerable bearing on the amount of blood the patient loses and the severity of her symptoms; consequently, they must also have some bearing on the prognosis and form of treatment one would resort to.

The macroscopical appearance of the uterus presents a very striking picture in this condition. The whole organ may take on a bluish, bluish black or purplish discoloration throughout, from the presence of the effused blood into its walls or under the peritoneum, or one-half may appear normal and the opposite portion show the characteristic discoloration. The placenta, with the exception of the infarcts and the compressed zone, corresponding to the area of the retroplacental clot, has shown an absence of pathology.

DIAGNOSIS.

In a woman in the last months of pregnancy, who has most likely showns signs of toxemia, with or without nephritic symptoms, the onset is usually of a sudden nature, the severity depending upon the amount of separation of the placenta. She complains of a sudden pain of a colicky nature, and soon shows signs of acute anemia, followed by those of shock due to the sudden distention of the uterus. A bloody discharge may or may not appear. On examination the uterus will be found to be larger than would be expected, very tender, and of a peculiar woody or ligneous consistency. It is difficult to map out the fetus, and its heart beats are rarely heard, while the examining finger in the vagina detects no placenta. With these signs present there should be no difficulty in differentiating between ablatio placentae, placenta previa, and rupture of the uterus.

PROGNOSIS.

The outlook is, of course, always much worse for the child. The mother's chances are very uncertain and are dependent upon many factors—the amount and rapidity of blood loss, shock, the condition of the cervix, and finally, the treatment.

TREATMENT.

The treatment depends upon the amount of hemorrhage, external or concealed; the amount of toxemia, and the dilatation of the cervix. When the separation is partial and the hemorrhage is not severe, the patient should be kept in bed, morphia given for relaxation and labor allowed to take its natural course. If she is a multipara, a greater opportunity is afforded for conservatism than if she is a primipara.

In cases of severe hemorrhage, the patient should be placed in the Sims position and the vagina tightly packed with gauze, or a hydrostatic bag (Dr. Lee's) placed in the cervix and the operation completed with forceps or by version. In those cases, especially in primiparae, in which the cervix is tight and symptoms of concealed hemorrhage are present, the only treatment is surgical, the classical caesarean section being preferred, which may be followed by hysterectomy should the bleeding continue.

No one thing has contributed more to the successful outcome in ablatio placentae than blood transfusion, so that in all cases, as soon as the diagnosis is established, the mother should be grouped as to her blood and a satisfactory donor obtained, who should be kept within easy reaching distance until the

necessity for his or her services no longer exists.

CASE REPORTS.

Case No. 1.—Mrs. W. M., aged 30 years, a quadripara, was due to be confined about January 15, 1917. On January 10, about noon, I was called to see her at her home and found her suffering with severe pains in the uterus. In the upper and left portion, there was an area which very perceptibly bulged from the contour of the remainder of the uterus. Her pulse was 90, and her temperature normal. She had not been having uterine contractions and gave an indefinite history of having struck herself against a door-facing three days before. There was no external bleeding. Morphia, a quarter of a grain, was administered hypodermatically, and an ice bag was applied over the swelling. The fetal heart sounds could not be located and no fetal movement could be felt, but the morphine relieved her pain, and during the afternoon uterine contractions began and increased in severity until she was delivered of a dead child weighing about eight pounds, at 11:30 p. m. The placenta very promptly followed delivery of the child; the maternal surface contained several large clots, probably each as large as a grape fruit, and in addition there was quite a large amount of clotted blood. The patient had no hemorrhage following the third stage of labor and had a normal puerperium.

Case No. 2.—Mrs. B. M., white, aged 38 years, a quadripara, had been admitted to the obstetrical service of John Sealy Hospital, April 13, 1924, with a complaint of bleeding from the vagina and pains in abdomen for 48 hours. On vaginal examination the cervix was found to be dilated about 3 c.m., and the fetus's head presented. The placenta could not be felt. There was no positive evidence of fetal life; the heart beat could not be heard. The patient had bled very little since entering the ward, but had had indefinite pains at irregular intervals. At midnight there was a slight increase in the bleeding, and at 12:30 a. m. the membranes ruptured. At 1:14, with the head on the perineum, she was given 1 c.c. of pituitrin (P. D. & Co.), hypodermatically. At 1:17 a. m. a premature seven months' stillborn fetus was expelled. Its abdomen was discolored and the adjacent portion of the cord was black. Immediately following the placenta several large, fairly firm black coagula were expelled. The placenta was expelled at 1:21 a. m., followed by several large, dark, firm clots, and one large piece of fetal membrane was removed manually. The placenta was small, with a fair-sized, dark clot adherent to one side. She was given 1 c.c. of ergot, hypodermatically, at 1:30 a. m., and the uterus remained firmly contracted. The urine was negative in this case, and the blood Wassermann negative.

Case No. 3.—B. G., colored, aged 20 years, biparous, was admitted to the obstetrical service of John Sealy Hospital on the afternoon of May 14, 1923. She had been having cramping pains since sometime in the forenoon, with a flow of blood from the vagina. No fetal movements had been felt since the day previous, and no fetal heart sounds could be heard. On vaginal examination the cervix was soft and dilated 3 cms. and the head presented. The placenta could not be felt through the cervix. She continued to have uterine contractions through the night and was delivered at 12:10 a. m. on the morning of the fifteenth. There was very slight hemorrhage during labor, preceding delivery, and after delivery. A large amount of dark blood-clots were discharged from the uterus, which were evidently due to premature separation of the placenta, which had probably occurred in the forenoon of the day before. The placenta was irregular, ragged and nodular, and contained several large blood-clots.

The blood count on May 14, was: 4,032,000 red cells; 65 per cent haemoglobin; 8,000 white cells, and 89 per cent of polymorphonuclears. The blood Wassermann was 4 plus positive. Urinalysis showed: Sp. gr. 1,008; albumen, large amount, and hyalin and granular casts. Blood chemistry showed: Total N. P. N., 25.1 mgm. per 100 c.c.; urea nitrogen, 12.0 mgm. per 100 c.c.; creatinine, 1.2 mgm. per 100 c.c. and uric acid, 2.1 mgm. per 100 c.c.

A urinalysis on May 17, was reported, showing: Alkaline reaction, sp. gr. 1.005; trace of albumen, and no casts. The patient was given active antisyphilitic treatment while in the ward, which was continued in the out-clinic. In the follow-up report of September 11, 1923, made by the Red Cross Nurse, this patient's condition was given as "recovered," which, of course, was a mistake as far as her luetic infection is concerned.

Case No. 4.—Mrs. W. H. C., aged 32 years, an octipara, was admitted to the obstetrical service, John Sealy Hospital, July 12, 1921, about 8 a. m. She had been seen shortly before at her home, by one of the obstetrical staff, on account of a sharp hemorrhage of bright red color, which began about 6 a. m. According to her menstrual history, she should have been delivered about August 27. Her blood-pressure was 124:78. She was taken at once to the operating room and delivered by manual dilatation and extraction, of a dead, male, double-ovum twin, which presented by the breech. The placenta could not be felt through the cervix and followed immediately the delivery of the child, with old blood-clots. The second child was alive, a male, weighing 5 pounds 10 ounces, and presented by the vertex.

The blood count showed: Red cells, 1,540,000; hemoglobin, 14 per cent; white cells, 12,000; polymorphonuclears, 90 per cent, and lymphocytes, 10 per cent. The urinalysis was as follows: Color, pale yellow; sp. gr., 1,008; heavy ring of albumin, many finely granular, coarsely granular and hyaline casts.

The blood chemistry on July 15, 1921, showed: Urea N., 50 mgm. per 100 c.c.; uric acid, 10.1 mgm. per 100 c.c., and creatinine, 4.2 mgm. per 100 c.c. Thirty days later the blood was as follows: Urea N., 15.2 mgm. per 100 c.c.; uric acid, 2.9 mgm. per 100 c.c., and creatinine, 1.5 mgm. per 100 c.c.

There was some difficulty in finding a donor, but on July 16 (four days after delivery), she was given 880 c.c. of citrated blood by the indirect method, and she made a very satisfactory recovery.

The same patient was admitted on March 10, 1923, in the seventh month of her ninth pregnancy. She had begun to bleed about 2 a. m. She called an ambulance and was immediately carried to the hospital. At 5:30 a. m. she was placed in the Sims position and the vagina packed with a tight tampon. Her blood-pressure at that time was 100:66 and her pulse 104. No fetal heart sounds could be found, and the placenta could not be located through the cervix when the tampon was applied. At 10:30 a. m., she was carried to the operating room, the tampon removed from vagina, and forceps applied to the head in the R. O. A. position. The vagina was full of blood-clots and the uterus distended with blood. A dead fetus was delivered, the placenta following immediately. There was no further hemorrhage.

Urinalysis showed a trace of albumen and fine granular casts. The blood count was: 2,848,000 red cells; 42 per cent hemoglobin; 13,000 white cells, and 89 per cent polymorphonuclears. The blood Wassermann was negative, the blood-pressure on the following day was 112:75, and her convalesence was without incident.

On August 5, 1923, she was sterilized (hysterectomy). I have seen her many times since, and her physical condition is excellent.

Case No. 5.—Mrs. R. C., aged 36 years, in her ninth pregnancy, with labor due April 16, 1923, was admitted on February 10, 1923, at 4 p. m., to John Sealy Hospital, *in extremis.* She had been dizzy frequently during the past few months, and on the afternoon of February 4, had fallen in her yard. After the fall, she had had extreme pain in the abdomen, back and legs, which lasted until about 10 p. m. After that time, she insisted that the bleeding was slight. On admission, the patient was extremely pale, partially comotose, and was crying out at intervals from the intense pain; her blood-pressure was 70:40, her pulse slow and weak, and she was dyspnoeic. The uterus was hard, rigid and distended, and painful on manipulation. No fetal heart sounds nor fetal movements could be made out.

The cervix was dilated to about the size of a dollar and was very thick and rigid. A portion of the placenta could be felt through the cervix, and the vertex presented. An emergency blood count showed: 736,000 red blood cells, and 20 per cent hemoglobin. Twelve ounces of urine were drawn from the bladder, and it contained 4 plus albumen and many fine, coarse and granular casts. There was no bleeding from the vagina.

The diagnosis was premature separation of placenta and prolapse. The vagina was packed tightly with gauze, in the Sims position. A hypodermoclysis of two pints of normal saline was given under the breast at 7:20 p. m.

At 9:20 p. m., as soon as a suitable donor could be found, 1,000 c.c. of citrated blood was transfused into her. Her blood-pressure was 118:60, her pulse 90, and temperature 98.

She had been given half a grain of morphine on admission, and this was repeated at 11 p. m. Milk and fluids were given her freely during the night. At 10:20 a. m. on the following day, the vaginal tampon was removed and a large sized Lee's hydrostatic bag was placed in the cervix. At 12:20 p. m. the bag was expelled, the membranes ruptured, and at 12:50 p. m., a seven months' dead fetus was delivered by mid-forceps. The placenta, which was ragged and covered with clotted blood, and a large amount of dark blood-blots, followed. Ergot and pituitrin were given. The blood-pressure after delivery was 98:50. At 3:30 p. m., she was given 800 c.c. of blood by transfusion. Immediately after transfusion her blood pressure dropped to 66:50, and she was given strychnia freely. At 6 p. m., the blood-pressure was 106:64. Her mental condition was decidedly better, and on the following day was apparently normal.

The blood chemistry on a specimen taken two days after admission was reported as follows: Chlorides, 450 mgm. per 100 c.c.; total N. P. N., 48 mgm. per 100 c.c.; urea nitrogen, 33.3 mgm. per 100 c.c.; uric acid, 3.84 mgm. per 100 c.c.; creatinine, 2.0 mgm. per 100 c.c., and sugar, 100.0 mgm. per 100 c.c.

Frequent urinalyses were made; one on February 26 was negative for albumen, sugar and casts, and the sp. gr. was 1,004. A blood count on the same date showed: 1,632,000 red cells and 40 per cent hemoglobin. The patient went home, on March 5, 1923, in fair shape, and was reported as being in good health on August 15. I saw her only a few days ago; she was about four months pregnant.

Case No. 6.—R. M., colored, aged 18 years, a primipara, was admitted to the obstetrical service of John Sealy Hospital, July 18, 1919, about 6:30 a. m., in convulsions. One-half grain of morphia was given. Two ounces of urine per catheter reported loaded with albumen and casts. Vaginal examination revealed a firm undilated cervix. The uterus had the peculiar ligneous feel spoken of by Williams, and the patient showed signs of severe pain on manipulations. The fetal heart could not be heard.

A classical cesarean section was done under spinal anesthesia, 3 c.c. of a 5 per cent novocain solution being used. The uterus was found filled with dark blood and clots; the placenta was completely detached, and a dead fetus of approximately eight and one-half months' gestation, was delivered. A supravaginal hysterectomy was done because of the condition of the uterus—hemorrhagic uterus. We were unable to secure any urine following the operation.

A diagnosis of nephritic eclampsia with premature separation of the normally implanted placenta, was made. As the patient was in convulsions and coma from the time of entering the ward until her death at 5:10 p. m., July 20, 1919, no history of the case could be obtained.

CONCLUSIONS.

1. Ablatio placentae is more frequent than is commonly believed.

2. A previous toxemia is a predisposing cause.

3. Etiologically, this type of hemorrhage can be classified into two groups, traumatic and toxic.

4. The treatment is expectant in all mild cases of ablatio placentae, whereas the patient should be delivered promptly if the condition is serious—preferably by cesarean section.

5. In those cases which show progressive anemia and a fall in blood-pressure and hemoglobin percentage, transfusion is of utmost importance.

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ABSTRACT OF DISCUSSION.

Dr. Harvey B. Matthews, Brooklyn, N. Y.: In the condition under discussion, etiology plays a very important role, for until we know more definitely than we now know what causes ablatio placentae, we will never be able to lessen its frequency. The two conditions most often responsible for ablatio placentae are trauma and toxemia. Syphilis is said to be a very important causative agent. Trauma is perhaps the most common cause, and indeed, when trauma has caused a premature separation of a normally implanted placenta we very often, for the first time, discover the existence of a toxemia. Careful and conscientious prenatal care is the best safeguard against the too frequent occurrence of this frightful accident.

Early and positive diagnosis of ablatio placentae is, of course, absolutely essential to the successful management of the case. Procrastination will lead to fatal results. Ascertain the present condition of your patient and find out, if possible, what has been done before you arrived on the scene and how much blood loss there has been. Action is imperative; delay is a crime. One woman may be able to lose 40 ounces of blood and not go into lethal collapse,

whereas 10 ounces of blood loss in another woman may mean profound shock and sometimes death.

In the active treatment of the condition *per se*, a great deal depends upon whether the hemorrhage is apparent or concealed. If the hemorrhage is apparent, it gives an immediate insight into what to do—stop the hemorrhage. In such a case the diagnosis is certain. On the other hand, when the hemorrhage is concealed, there might be some doubt about the diagnosis and hence some necessary delay in the treatment. In this connection, I wish to call your attention to the diagnostic value of oft-repeated blood-pressure readings in the diagnosis of hemorrhage. The blood-pressure is invariably low and becomes progressively lower and lower in the presence of active hemorrhage; it is more reliable and more accurate than the pulse count. A doctor must take the blood-pressure, and his constant presence is certainly always needed in such cases.

In the profoundly shocked cases, immediate blood transfusion is a life saver. I have saved at least two women from death by early and immediate transfusion. The method of transfusion makes no difference; in the "hurry up" cases such as these, I prefer the citrate method, giving 500 to 700 c.c. of blood. Donors should always be available.

To control the active bleeding locally, the bag, as recommended by Dr. George H. Lee and referred to by Dr. Robinson, or any other similar device, works well. It is placed within the cervix, either with or without rupture of the membranes, and the vagina then packed firmly with wet gauze. Often when there is considerable dilatation of the cervix, *e. g.* 4 to 6 c.m., rupture of the bag of waters is all that is necessary. Allow labor to proceed in the usual way. Upon complete dilatation of the cervix, or whenever delivery has been accomplished, great care should be exercised to prevent further loss of blood. A secondary hemorrhage is distinctly bad.

Those cases that cannot be treated conservatively require cesarian section. Don't do a cesarian section on one of these cases when it has been handled a great deal before you get it, and don't do a section after you have put in a bag or a pack and failed. Infection is surely present, and infection scattered in the wake of hemorrhage and shock usually means death. Cesarian in primigravidae, before handling, is sometimes the procedure of choice, but I doubt very seriously if it should ever be the method of choice in the multigravidae.

Dr. Willard R. Cooke, Galveston: Decision as to treatment of this condition must be based on three principal factors: (1) Degree of shock; (2) existence of potential or actual infection, and (3) environment.

When the patient is in surroundings which make the preservation of asepsis improbable, the cesarian section should not be done unless it is positively necessary; nor should cesarian section be thought of where the degree of shock is very great. In such cases, particularly if there is shock or severe hemorrhage, treatment should be directed primarily toward control of the shock and hemorrhage by the usual methods, particularly the transfusion of blood. In cases with no potential infection, and under ideal surroundings, cesarian section is the method of choice, especially in the presence of some mechanical obstacle to delivery, such as fibrous cervix, contracted pelvis, or any of the well recognized causes of dystocia. These remarks are made especially as a warning against rushing into cesarian section in every case of premature separation of the placenta, more particularly in those cases which have been packed at home in order to permit the patient to be brought to the hospital.

Dr. E. C. Gordon, Columbus: I want to relate a case of premature separation of the placenta, with a most happy ending. A lady in the seventh month of pregnancy, was tripped up by a hog, causing her to sit down on the ground violently. Her husband, who was working near, saw her fall and came to her at once. Evidently she was suffering severely from shock, as she refused to let her husband leave her to call a doctor. She recovered from the shock and pain in a few hours. It being night and five miles to a doctor, they decided to wait until morning, when she got up and prepared breakfast, after which her husband reported to me. Although I suspected a separation of the placenta, I thought it was only partial, and as there was no external hemorrhage I advised her husband to keep her in bed for a few days, and call me in case anything turned up. Nothing "turned up" for twenty-eight days, when she went into labor. In two or three hours she was delivered of a dead, macerated baby, a shrunken placenta, and some macerated clots. Twenty minutes later, she was delivered of a six and a half pound live baby, and a few minutes later a normal placenta. You may think out the details of just what happened in this case.

THE VALUE OF *X*-RAY IN OBSTETRICS.*

BY

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DAVIS SPANGLER, M. D.,
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The diagnosis of pregnancy by the use of the röentgenogram is not a recent thing. Since 1899, when Mullerheim reported his work, there have been sporadic reports of röentgenographic work done on pregnant patients. Bartholemew calls the *x*-ray picture the "fourth positive sign of pregnancy."

There has been some hesitancy on the part of some obstetricians to subject pregnant patients to the Roentgen-ray, because of the possible remote results on the fetus, concerning which time alone can tell. In the present state of our knowledge, however, there is no reason to believe that the short exposure necessary for a roentgenogram will be injurious to the fetus.

While the fetal skeleton has been demonstrated by the *x*-ray as early as the end of the fourth month, it is generally conceded that a positive diagnosis cannot usually be made before the end of the fifth month. From this time on to term, the diagnosis becomes increasingly positive. From a medicolegal standpoint, this method of diagnosis is unanswerable after the fifth month. Stein and Arens report a case in which a diagnosis of pregnancy was made in an unmarried girl, aged 15. The mother threatened to sue for defamation of character, but when confronted with the fetal skeleton on the film, she was at once forced to accept the verdict.

In estimating the size of the pelvis, the distance from the plate, the difference in the planes of the pelvis cause more or less dis-

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tortion of the image and depreciate the value of the Roentgen-ray for practical purposes of diagnosis. A number of röentgenologists have devised methods of mensuration, that are more or less accurate, and these will, no doubt, be worked out and standardized in the future.

At present, good stereoscopic röentgenograms, properly interpreted, will give a much better understanding of the relation of the fetus to the pelvic structures, than when dependence is put in measurements alone. This is especially true in contracted pelvis, spinal curvature, and exostoses. Here we get not only the details of the bony deformations, but the actual relative size of the fetal head which must pass through this outlet. Multiple pregnancies are sometimes diagnosed, are frequently only suspected, and have often been completely overlooked before labor. The usual suspicion is of a hydramnios with a single pregnancy; one of our cases, thought to be a hydramnios, which was present, revealed by the *x*-ray an unsuspected twin pregnancy. It is of some value to know the position of the feti in twin pregnancy, and in doubtful presentations in single pregnancies.

A röentgenogram should always be taken in cases in which cesarean section is contemplated, except, of course, in case of extreme emergency. The procedure requires a comparatively short time. The embarrassment of the delivery by cesarean of a monster, an already dead fetus, or an extremely small child, might be prevented. Of course, the röentgenogram must be properly interpreted, as is not always the case.

The size of the fetus can be fairly accurately determined by the röentgenogram, and an approximation of the age can be reached. In spite of the excellent work of Hess, we feel that we are not yet in a position to state the exact age of the fetus in utero. There are too many of the finer details of the osseous structure lost or blurred by the distance from the film, by the movements of the fetus, the respiration of the mother, and a multitude of details that constantly arise. The position and change of position of the fetus can be determined accurately.

A breech presentation has been seen to undergo spontaneous version at the eighth month, and Stein reports the case of a vertex presentation, shown by röentgenogram at the thirty-sixth week, after the rupture of the membranes, which became a breach, also diagnosed by *x*-ray, and delivered as a breech. As an illustration of this, we have some slides which demonstrate the case of Mrs. W. A diagnosis of breech was made by palpation and confirmed by the *x*-ray. An external version was then performed, and another picture taken, which showed the head in the pelvis. The child was delivered as a vertex presentation.

Spaulding has given to the profession one of the very few pathognomonic signs of intra-uterine death of the fetus—the overlapping of the cranial bones before labor. Two of our cases have given the impression of the shrinkage of the cranial contents with a flattening of the normal transparietal arch or dome without definite overlapping of the bones; a sort of flattening of the head, a condition which seemingly procedes the overlapping of the bones. Death of the fetus had been suspected only a few days in one of these cases, and a later röentgenogram would doubtless have shown the overlapping. These patients were delivered of dead feti.

Of fetal abnormalities, anencephaly, or craniorachischisis, is one of the most frequent. Kirkness, in 1911, reported one case of anencephaly in 900 deliveries in a series of 11,521 births in the Rotunda Hospital. Case, in 1917, reported the first and only case of anencephaly diagnosed by the röentgenograph that we have been able to find in the literature at our disposal. He says, "A careful search of the literature has failed to disclose the report of a similar instance."

It has been our privilege to see two cases of this abnormality, and to make a correct diagnosis before delivery. In each instance labor was induced on the findings of the *x*-ray, in order to spare the mother the burden of continued pregnancy and the chagrin of delivering a monster at term.

Campbell and Willitts reported the case, in January, 1924, of an anencephalic monster, in which the diagnosis was made before labor, the *x*-ray examination having been made on September 5th, 1922. They state that so far as they know this is the second case reported in the literature and refer to the case reported by Doctor Case as having been the first. At the time this report was published, the report of our cases was in the hands of the publishers, having been presented before the Dallas County Medical Society in March, 1922, and before the American Roëntgen Ray Society, in September, 1923.

CONCLUSIONS.

1. Röentgenograms of the pregnant uterus are apparently without danger to either mother or fetus.
2. Except in cases of unusual emergency, roëntgenograms should be made before finally determining on cesarean section.
3. They are of great value in medicolegal cases.

4. In any suspected abnormality, they will give valuable information even though it may be negative.

5. Fetal abnormalities can be detected more certainly, more accurately, and at an earlier date, by the röentgenogram than by any other means.

ABSTRACT OF DISCUSSION.

Dr. R. A. Johnson, Houston: In making a diagnosis of death in utero of the fetus, two cases have been seen in which the *x*-ray has been of great value. The overlapping of the cranial bones were clearly made out, and the diagnosis made from this finding alone. Another condition in which the *x*-ray is of value, is pseudocyesis. In one case, we made the diagnosis by *x*-ray. The abdominal wall was so tight that we could not successfully make an examination. The *x*-ray is a very valuable aid in rare conditions in the uterus, death in utero, and those cases where vaginal examination gives no data.

Dr. R. T. Wilson, Temple: The doctors are particularly fortunate in having seen these cases of anencephaly and in making a diagnosis röentgenologically. These cases are quite rare. Dr. Spangler is to be congratulated upon his technique as shown by these slides. The *x*-ray is useful in obstetrics in at least two ways, in early pregnancy to establish the diagnosis, and in late pregnancy to determine the position. In the former case, poor technique may prove disastrous because the fetal skeleton, having a small lime content, may not cast a shadow, and upon this shadow diagnosis will depend.

Some years ago a young unmarried woman was brought to our clinic with an enlarged uterus and a diagnosis was, of course, of special importance. With films of about ordinary quality we were unable to discover any skeletal shadows, hence a negative opinion was given as to pregnancy. That night the child was born, a dead fetus of probably five and one-half months' development. This illustrates the value of good technique. With good technique we have since been able to make the diagnosis of pregnancy as early as the fourth month.

Dr. H. Reid Robinson, Galveston: While in San Francisco, I saw many of the pictures of fetuses in utero taken in the service of Dr. Spaulding. The pictures that Dr. Spangler has just shown us are as good as any I saw there. We are very much interested in this line of work now in the obstetrical service of the John Sealy Hospital, but our results have not been as good as those shown here, today, by Dr. Spangler. The *x*-ray is certainly a great aid in complicated obstetrical diagnosis.

Dr. Willard Cooke, Galveston: The pictures that Dr. Spangler has shown, are more than excellent—being better than any similar pictures that I have seen anywhere. One important point in the early diagnosis of pregnancy is the use of the *x*-ray in cases where there is difficulty in making diagnosis from a physical examination, when a diagnosis is necessary as a guide for further procedure, especially at or near the fifth month before the development of the positive signs of pregnancy, at which time a certain percentage of cases will show recognizable centers of ossification in the fetal skeleton. The degree of value of *x*-ray diagnosis depends upon the skill of the technician. Positive statements as to feto-maternal disproportion, and even more so as regards actual measurements of either fetal head or pelvic diameters, is not yet practicable on account of many very obvious factors, and one can probably obtain a better idea in regard to disproportion through physical examination than by the *x*-ray. Diagnoses of hydramnios, of monsters and of twins, in the cases reported by Drs. Bourland and Spangler, demonstrate the value of this method in such cases.

Dr. J. W. Bourland (closing): I wish to emphasize the point that Dr. Cooke brought out, that a negative result does not necessarily exclude the possibility of pregnancy. The *x*-ray must be properly interpreted before positive statements can be made. In twin pregnancy, one fetus may be overlooked due to overlapping of the parts, and this is particularly true in a patient with a thick abdominal wall. The *x*-ray is valuable as an aid to diagnosis just as are the other laboratory methods, but we must still depend on our clinical signs in order to check up and make a complete diagnosis. The *x*-ray is very valuable in doubtful cases. In the case of anencephalus, the head could not be felt on palpation; it was on this sign, together with the small size of the uterus, that we were led to suspect some abnormality.

Dr. Spangler (closing): To have Spaulding's sign, that is, overlapping of the cranial bones, I believe that there must be some increase in intrauterine pressure as in beginning of labor. I believe the overlapping of the bones is not so often seen as is the flattening of the parietal arch spoken of before. In hydramnios, the fetus is usually in an extended condition, that is, the flexion of the body and extremities is to a certain extent lost. In the early months of pregnancy the fetal parts may be brought out on the *x*-ray plate by pneumoperitoneum or by filling the rectum and colon with air. Pneumoperitoneum is not desirable, because there is already an increase in intraperitoneal pressure due to the enlarged uterus. It is often hard to get a clear picture of a twin pregnancy due to overlapping of fetal parts, and sometimes only one head can be clearly demonstrated. The thing on the plate which first strikes the observer, is the multiplicity of extremities, there being too many arms and legs for any one normal child. By careful study of the plate the various parts of the two feti can be demonstrated and an accurate diagnosis made.

CORN WHISKEY AND ITS CONSTITUENTS.*

BY

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In examining a large number of samples of illegitimate liquors seized in and around Fort Worth during the past two years, it has been of interest to note the deviation of the composition of such liquors from that generally expected of them to fit them for beverage purposes. Before going into the details of the composition of the illegitimate liquors commonly found on the bootleg market, it may be well to review the chemical changes which take place during fermentation. As starch is by far the most common and cheapest carbohydrate available, its use becomes desirable for liquor manufacture; but as it is not readily decomposed by the usual ferments, it must be hydrolyzed into simpler carbohydrates. This is accomplished by an enzyme formed in sprouting grains. Thus, when Indian corn is allowed to sprout a

*Read by invitation before the Tarrant County Medical Society, Fort Worth, October 21, 1924.

quantity of its starch is converted into glucose and levulose by the enzymes contained in the embryo. Fermentation is then carried on by the enzymes of the added yeast.

The products formed by the fermentation of glucose and levulose are ethyl alcohol, acetaldehyde, glycerol and carbon dioxide. Zerner,[1] in attempting to commercialize this method of manufacture of glycerol for the Austro-Hungarian government for munitions purposes during the late war, found that during this fermentation the products were formed in the ratio of carbon dioxide 37.3 per cent, acetaldehyde 12.9 per cent, glycerol 26.8 per cent and ethyl alcohol 23.7 per cent. Hence, one bushel of corn will yield 6.2 proof gallons of alcohol, theoretically, but practically it will yield only 5 proof gallons. But controlled methods of fermentation and distillation are not thought of by the moonshiner and other products find their way into the finished product. Beside the ethyl alcohol, acetaldehyde and glycerol that are formed from the glucose and starch in the corn grain, fusel oil is also produced. The latest accepted opinion concerning fusel oil is that the alcohols comprising it are derived from the decomposition of amino acids present in the corn grain. Wiley[2] names some sixty-five substances contributing to the composition of fusel oil. Only a few of these will be considered here, namely, amyl, butyl and propyl alcohols and their isomers, and acetaldehyde.

As a general rule the distiller of illegitimate whiskey does not know what is in his mash; he knows nothing about the differences in boiling points of the constituents, and to him the word alcohol means only ethyl alcohol. The process can scarcely be called fractional distillation as no cognizance is taken of the composition of the distillates at various temperatures and attention is seldom paid to the temperature. By far the greater amount of illegitimate whiskey is produced in localities where accurate methods of temperature control are inaccessible. Wood forms the principal fuel and the heat thus obtained cannot be readily controlled, as a result of which the alcohols boiling at temperatures above the boiling point of ethyl alcohol pass over into the distillate with acetaldehyde and ethyl alcohol. Since the boiling point of acetaldehyde is some 58 degrees below that of ethyl alcohol, it passes over first and unless a very efficient condensing system is employed, the majority of the acetaldehyde passes into the atmosphere. It is the odor of this substance that is most evident in the vicinity of a still in operation.

The distillate thus obtained is usually placed on the bootleg market without further treatment. Occasionally a moonshiner distils his product a second time, but, as will be seen by the great difference in the boiling points of acetaldehyde and ethyl alcohol, the former will pass over first; and on account of the slight difference in the boiling points of ethyl alcohol and some of the lower alcohols comprising fusel oil and the lack of knowledge on the part of the distiller of the law of differences of vapor pressure and its application to fractional distillation, no sharp differentiation and separation of these products can be made by the crude apparatus employed by the moonshiner.

In examining a large number of samples of moonshine whiskey obtained in the vicinity of Fort Worth, the writer was surprised to note the presence of large quantities of fusel oil. It was not infrequent that as much as two per cent was found. To one not taking into consideration the variable composition of fusel oil, a percentage as high as this might indicate a high toxicity. Such was the writer's opinion until he made a detailed investigation of the composition of the fusel oils obtained from local products.

The method used for the separation of the aliphatic alcohols found in distilled liquors is the writer's modification of the method of Frary[3] and of Haines and Marden[4] and which was presented by him[5] in November, 1922. The composition of fusel oil from about two hundred samples of corn whiskey was found to be approximately as follows: Isopropyl alcohol, 750 parts per thousand; n-propyl alcohol, 180 parts per thousand; isobutyl alcohol, 40 parts per thousand; amyl alcohol, 20 parts per thousand, and undetermined, (probably esters), 10 parts per thousand. Compared with tables of analyses of fusel oils from whiskies manufactured under controlled methods, this analysis shows a preponderance of isopropyl alcohol, whereas commercial fusel oil usually contains from 800 to 950 parts per thousand of amyl alcohol.

It is on this point that the writer bases his opinion that the local bootleg liquors are relatively nontoxic from the standpoint of fusel oil. While it is true that isopropyl alcohol is empirically classed as a constituent of fusel oil, it may be considered the least toxic of the alcohols contained in that mixture, as their toxicity increases with their

1. Zerner, E.: "The Chemistry of Alcoholic Fermentation," Ber. 53-B, p. 325, 1920.
2. Wiley, H. W.: "Beverages and Their Adulteration," Philadelphia, 1919.
3. Frary: "Studies in Chemistry," No. 1, University of Minnesota, 1912.
4. Haines and Marden: "A Method for Determination of Alcohol," J. Ind. Eng. Chem., 1917, Vol. ix, p. 1126.
5. Stevenson, H. M.: "Estimation of Aliphatic Alcohols in Distilled Liquors." Paper read before Central Texas Section, American Chemical Society, November 17, 1922.

molecular weight. That isopropyl alcohol is relatively nontoxic is evidenced by the experiments of many investigators in this country and in Europe, and whose investigations show that isopropyl alcohol is not more than twice as toxic as ethyl alcohol. In fact, isopropyl alcohol has begun to replace ethyl alcohol in medicine and in the arts. In Germany, it has begun to replace ethyl alcohol as a solvent for a number of official tinctures, in preparing solid extracts and in isolating active principles; in the United States, it has been used as a base in preparing dentifrices, mouth washes, perfumes, hair tonics and other cosmetics, while as a solvent in certain commercial processes it has been found to be superior to ethyl alcohol.

That the untoward symptoms resulting from ingestion of corn whiskey are probably not due to the isopropyl alcohol it contains, may be evidenced from the following references to recent literature.

Fuller[6] prepared a series of standard pharmaceuticals with isopropyl alcohol. After standing for two years they showed no deviation in their appearance or therapeutic value.

Pohl[7] administered 3 grams of isopropyl alcohol per kilo of body weight and found that it exerted no other effects than might be produced by an equal quantity of ethyl alcohol. He also found that isopropyl alcohol is exhaled as such and as acetone. Adrenalin increases the exhalation of acetone and isopropyl alcohol when the latter is given. A larger dose of isopropyl alcohol did not markedly increase the excretion of nitrogen.

Loffl[8] took doses of 4, 8, 8 and 15 c.c. of isopropyl alcohol in the form of a cordial on four successive days without any other consequences than the temporary effect that similar quantities of ethyl alcohol would produce. He considers its use as a medium for cosmetic preparations and in mouth washes as entirely harmless.

In summarizing the recorded effects of isopropyl alcohol, Grant[9] believes that there is no objection to its use as a lotion or as a vehicle for medication which does not involve the probability of swallowing more than a few cubic centimeters.

Fuller[6] finds that isopropyl alcohol has no effect on the optical system of human beings and that its action is comparable to an equal amount of acetone, to which it is oxidized during metabolism. In experimenting with *Bacillus typhosus* he finds that isopropyl alcohol is superior to ethyl alcohol as a disinfectant. He recommends its use as a dehydrating agent in histological work, for which purpose it is the equal of ethyl alcohol.

The following pharmacological properties of isopropyl alcohol are noted by Macht[10]: Administered by mouth it produces narcotic effects, in larger doses general anesthesia, and finally coma and death; very little of the substance is absorbed by inhalation and very little evidence has been found of its absorption through the skin; while the drug is poisonous to isolated heart muscle it is not very toxic to the heart and circulation in general of the intact animal, and death after a fatal dose is due to paralysis of the respiratory center.

Wilson and Sale[11], experimenting with Mexican vanilla beans, find that isopropyl alcohol is a much more efficient solvent for vanillin than is ethyl alcohol and they consider it sufficiently nontoxic to replace ethyl alcohol in the preparation of vanilla extract for culinary purposes.

By far the greater part of the amyl alcohol found in the samples examined was contained in three samples. In each of these three samples the manufacturer admitted having redistilled the first run and finding it too strong to put on the bootleg market, diluted it with tailings from the first distillation. These, of course, contained quite a large quantity of the higher boiling alcohols.

By far the most harmful compound found in corn whiskey of moonshine origin is acetaldehyde. However, only small quantities of this substance reach the finished product. Only in one instance has the writer found more than 10 per cent of the theoretical amount of acetaldehyde in a sample of corn liquor. This was a sample of liquor manufactured by a person who said he had run his product three times, each time discarding the tails which he knew to be high in fusel oil. But he did not know that the first runnings were high in acetaldehyde, which is a more dangerous substance from a pharmacological standpoint than is fusel oil. The amount of acetaldehyde found in whiskies prepared in this locality is some 300 to 400 per cent in excess of that found in bonded and aged whiskies, in which the acetaldehyde content varies from 5 to 12 parts per one hundred thousand.

Relatively little information has been published on the toxicity of acetaldehyde. Al-

6. Fuller, H. C.: "Properties and Uses of Isopropanol," Chem. Met. Eng., Vol. xxix, p. 538, 1923.
7. Pohl, J.: "The Fate of Methyl and Isopropyl Alcohols," Biochem. Z., Vol. cxxvii, p. 66, 1921.
8. Loffl, K.: "Isopropyl Alcohol," Seifensieder-Ztg., Vol. xlviii, p. 452, 1921.
9. Grant, D. H.: "Pharmacology of Isopropyl Alcohol," Jour. Lab. Clin. Med., Vol. viii, p. 382, 1923.
10. Macht, D. I.: "Pharmacological Examination of Isopropyl Alcohol," Arc. Int. Pharmacodynamie, Vol. xxvi, p. 285, 1922.
11. Wilson and Sale: "Suitability of Various Solvents for Extracting Vanilla Beans," Jour. Ind. Eng. Chem., Vol. xv, p. 782, 1923.

bertoni and Pisenti[12] note the following as some of the effects of administering acetaldehyde:

"The principal effects are on the blood vessels, which take the form of arteriosclerosis. Occasionally the tunica intimia becomes somewhat thickened; the adventitia is nearly always thicker than normal. The changes produced in the mucous membranes of the stomach and kidneys were faint at times, while at other times were very pronounced. In the kidneys of some of the subjects the Bowman capsule contained a fine fibrous and granular substance. The vascular net-work of the glomerulus was constantly filled with blood, as were also the rest of the blood vessels of the kidney."

In the liver of one of the subjects the investigators found a peculiar growth of connective tissue and an infiltration of leucocytes. The liver in this case had the appearance of incipient cirrhosis, similar to that produced by the long continued use of ethyl alcohol.

According to the U. S. Dispensatory, the intoxication produced by acetaldehyde is characterized by a rapid and complete loss of sensibility. It appears to paralyze the vagi, although its cardiac action is comparatively feeble. It exerts a powerful action on the respiration, in small quantities quickening it, in larger ones depressing it, and the temperature is lowered by it. This substance, which has been detected in every sample of corn whiskey examined in this series, is probably responsible for the majority of symptoms resulting from acute intoxication produced by drinking such whiskey, insofar as those symptoms are not attributable to the ethyl alcohol contained therein.

Another substance which frequently comes into consideration in the analysis of alcoholic beverages is methyl or wood alcohol. Its wide use as a denaturant of ethyl alcohol has resulted in it being drunk along with ethyl alcohol for the intoxicating effects of the latter. In a commonly used formula methyl alcohol is present to the extent of 2 per cent.

Lambling and Vallee[13] find that methyl alcohol is fatal in doses of 30 grams and toxic in doses of 8 grams. The symptoms they observe following its administration are violent headache, pain in the digestive tube and subsequent blindness. Eight cases of methyl alcohol poisoning are reported by Isaacs[14]. His conclusions are that methyl alcohol varies in its toxicity in different individuals. The symptoms noted are those of depression of the medulla and the cranial autonomic and at times the sacral nerves. There is usually a marked and early effect on vision. Unless the anatomic injury is beyond repair, rapid disappearance of symptoms follows intense alkali therapy. Rabinovitch[15], in studying a fatal case of methyl alcohol poisoning, noted a progressive increase in the uric acid, urea and creatinin content of the blood and a decrease of the carbon dioxide of the plasma and of the oxygen of the blood. Death occurred six days after the methyl alcohol had been taken. No methemoglobin was found in the blood.

In this vicinity during the past three years the writer has examined only three beverages which were found to contain methyl alcohol. One was a large quantity of bay rum which was being sold as a beverage. Another case was that of a man who entered a local hospital with the statement that he had just drunk some whiskey and was becoming blind. The whiskey he presented was contained in a quart bottle bearing the label of a well-known Scotch brand of whiskey. The man had apparently drunk half a pint of the liquor which on analysis, appeared to be composed of equal parts of corn whiskey and denatured alcohol. The patient recovered in a few days.

The third case that I have observed of the use of alcohol denatured with methyl alcohol for beverage purposes was that of a hospital attendant who attempted to prepare gin by adding oil of juniper berries to alcohol kept by the hospital for disinfecting purposes. The attendant was informed by persons not knowing the difference between denatured and pure alcohol that the substance was suitable for beverage purposes. The attendant became skeptical and a sample of the "gin" was submitted to the writer for analysis, and it was found to contain 2 per cent of methyl alcohol. This was further attested by the label on the container and by the fact that the hospital was not licensed to purchase pure ethyl alcohol. As only a small quantity had been taken, no toxic effects were observed.

In a recent article by Doran and Beyer[16] there are presented ten typical analyses of whiskies, seven of which were said to contain copper or zinc salts. These compounds, so these authors claim, are the cause of a great number of gastric disturbances which accompany the use of moonshine liquor. I have not as yet detected copper or zinc salts in freshly prepared corn whiskey in this vi-

12. Albertoni and Pisenti: Centr. f. d. Med. Wissensch., 1888, Vol. xxvi, p. 401.
13. Lambling, E., and Vallee, C.: "Some Poisonings by Methanol," Arch. Int. Physiol., Vol. xviii, p. 617, 1921.
14. Isaacs, R.: "Acute Methyl Alcoholic Poisoning," Jour. A. M. A., Vol. 75, p. 718, 1920.
15. Rabinovitch, I. M.: "Biochemical Studies in a Fatal Case of Methyl Alcohol Poisoning," Arch. Int. Med., Vol. xxix, p. 821, 1922.
16. Doran, J. M., and Beyer, G. F.: "Character of Moonshine Liquor," Am. Jour. Pub. Health, Vol. viii, p. 831, 1923.

cinity. It is not uncommon to find zinc salts in mash that has been allowed to reach the stage of acetic fermentation in contact with galvanized vessels; but as distillation is seldom carried far enough to permit the passage of acetic acid into the distillate, the reaction of the latter is not sufficiently acid to cause it to attack the container. The tailings from a copper still where such is used, are occasionally found to contain copper acetate, due to the solution of copper oxide from the interior of the still by acetic acid contained in the mash.

One instance has been noted, however, of the occurrence of a tin salt in a sample of corn whiskey from this vicinity. The whiskey had been allowed to stand in a tinned milk can for about eight weeks. The residue from a distillation gave a decided reaction for tin. As tin does not readily form an acetate, the contamination probably resulted from an unclean milk can.

A question frequently asked by consumers of bootleg whiskey is whether it contains any "lye." They doubtless refer to the fact that caustic alkalies are occasionally used to remove the cortex of the grain prior to the fermentation. So far, I have not found any caustic alkalies in corn whiskey. Occasionally, however, the fermented mash is strained and sold without distilling. This may contain traces of alkali, but it is rare, as the acids formed incident to fermentation neutralize what little alkali has been added.

Thus it will be seen that, judging from the results of these analyses, the fears generally entertained by persons consuming bootleg whiskey that great harm may come from the fusel oil content, are unfounded. But they are not aware of a more potent danger in the form of acetaldehyde. Still further ignorance of the composition of alcoholic preparations is indicated by the occasional drinking of preparations containing methyl alcohol. Relatively few authentic cases of poisoning by methyl alcohol are recorded in the medical literature, and in the analyses of some two hundred samples of alcoholics in this series, only three were found to contain methyl alcohol. It thus appears that the frequent press stories of the terrible toll of blindness due to drinking wood alcohol are probably without serious foundation and that the presence of metallic salts in corn liquors is not as widespread as is thought by some.

Compressible Capsules Mercury Salicylate "Synthetic," 1½ Grain.—Mercuric salicylate 0.1 gm. (1½ grain) suspended in 1 c.c. of a mixture of benzoinated lard, 67 per cent; peach kernel oil, 31 per cent; camphor, 1 per cent; phenol, 1 per cent. Synthetic Drug Co., Toronto, Canada.

MISCELLANEOUS

ALUMNI ASSOCIATIONS, ATTENTION.

It will be a favor to the Committee on Alumni Banquets for the forthcoming Annual Session of the State Medical Association, if officers of the several alumni associations of the State will get in communication with the undersigned, and as early as possible. There are ample accommodations in Austin for such banquets but, manifestly, better service can be rendered if arrangements can be at least tentatively made, well in advance. The committee does not know either the names or the addresses of officers of alumni associations, hence is helpless until communicated with. Fraternally,

M. H. BOERNER,
Austin, Chairman Alumni Banquet Committee.

THE UTILITARIAN TONSIL.*

to Dr. J. A. O'Toole.

we have rseived Notice Do you Remember you Said you would Guarentee a cure by takeing out My tonsels. O I regret haveing the work done I miss them So Bad at Some times my throat Bothers me a bout getting my food Swallowed leaves a lump or Something that I cant get down for so long I Still have Rheutism. the Childrens Dr. Said I shouldent of had my toncils takened out at tall I Still have that Noise in my Ears just as bad as I did before Oh I Regret haveing it done So much I consider I doant owe you any money you owe me 5000 dollars for doeing the work when you Shouldent done the takeing out of my tonsils I need my tonsils to talk I ned them to Swallow with they were quite necesary to my body in many ways.
I feel that I have lost Something I never will Regain I cant Sing Hardly at all Oh if I ever miss anything in my life it is my toncils I hate you like a Rattle Snake for telling me what you did that is one mistake I made and for give But that woant Bring them Back.

MRS. B. L. CALENDAR,
Roaring Springs, Texas.

CURTAILING VENEREAL DISEASE PREVENTION.

In reporting the Treasury Department appropriation bill to the House of Representatives, the Committee on Appropriation has reduced to $50,000 the amount available for the division of venereal diseases in the U. S. Public Health Service. The effect of this reduction will be to curtail the activities of this division and entirely eliminate the work of the division in coöperation with state boards of public health in venereal disease control. The appropriation for the current year, as fixed by the last Congress, is $149,000. Action of a similar kind was taken by the House Committee on Appropriations at the last session of Congress, but, as a result of protests from state boards of public health and similar organizations, the full appropriation was restored in the Senate. In explanation of the cut, the committee states that $25,000 represented allotment to the states, and that the remainder represents other activities. The sum of $50,000, the committee feels, is adequate for the amount of work that the Public Health Service "should carry on" in venereal disease prevention. It would be interesting to have the basis on which this decision was made.—*Journal A. M. A.*, January 3, 1925.

*A communication, verbatim et literatum, received by one of our readers. It serves as a reminder that we can't always sometimes tell what the future will bring forth.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Iletin (Insulin-Lilly) U-80.—Five c.c. ampules containing 80 units of iletin (insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152), in each c.c. Eli Lilly & Co., Indianapolis.

Ampoules Adrenalin Chloride Solution Rx 1, 1:1000, 1 c.c.—A solution of adrenalin chloride (New and Nonofficial Remedies, 1924, p. 117), one part in physiological solution of sodium chloride, 10,000 parts without preservative. Parke, Davis & Co., Detroit.

Ampoules Adrenalin Chloride Solution Rx, 1:2600, 1 c.c.—A solution of adrenalin chloride (New and Nonofficial Remedies, 1924, p. 117), one part in physiological solution of sodium chloride, 2,600 parts, without preservative. Parke, Davis & Co., Detroit.

Ampoules Adrenalin Chloride Solution 1:1000, 1 c.c.—A solution of adrenalin chloride (New and Nonofficial Remedies, 1924, p. 117), one part in physiological solution of sodium chloride 1,000 parts, without preservative. Parke, Davis & Co., Detroit.

Thigenol.—Solution Sodium Sulpho-Oleate-Roche.—A solution of the sodium salts of synthetic sulphooleic acid containing 2.85 per cent of sulphur. Thigenol has the actions and uses of sulphoichthyolate preparations (New and Nonofficial Remedies, 1924, p. 350). The Hoffman-LaRoche Chemical Works, New York.

Ergotole.—Extractum Ergotae Liquidum.—A liquid extract of ergot containing 19 per cent of alcohol. It is standardized on the uterus of the virgin guinea pig so that a 1:2500 dilution of ergotole has the same activity as a 1:20,000,000 solution of beta-iminazolyl-ethylamine hydrochloride. The actions and uses of ergotole are the same as those of ergot. Ergotole is also marketed in ampules containing 1 c.c. Sharp & Dohme, Baltimore.

PROPAGANDA FOR REFORM.

The Danish Gold Treatment of Tuberculosis.—Hardly a year passes but that the announcement is made of some new method of treating tuberculosis. The most recent method to receive sensational publicity duly accorded any venture in the treatment of tuberculosis, is a preparation of gold advanced in Denmark under the name "Sanocrysin." At a meeting of physicians in Denmark, Professor Moellgaard, the originator of the remedy, described its production and its effects. Other physicians gave an account of their results with the treatment. Several deaths from the remedy were reported. It is stated that Professor Moellgaard was the most cautious of all who spoke.—*Jour. A. M. A.* December 13, 1924.

Chlorin in Respiratory Diseases.—In New York two clinics were established by the Health Commissioner to determine the efficiency of chlorin inhalations in the treatment of respiratory diseases. These clinics began active work June 1. They continued in operation until August 1, when they were closed because the results were considered unsatisfactory. It is reported that only 6.5 per cent of 506 persons with various respiratory diseases reported themselves as cured. Fifty-three per cent of the patients reported improvement, but the physicians in charge do not attach much importance to such reports since it is well known that patients with minor respiratory infections tend to improve by the very nature of their disease. It is evident that the physician who uses the chlorin treatment in his practice, must do so with the distinct understanding that he is using an unestablished method.—*Jour. A. M. A.*, December 6, 1924.

NEWS

Jefferson Davis Hospital will be erected and operated jointly by the city of Houston, and Harris county. The contract for building this hospital has been awarded, the hospital to cost $24,283. The hospital is to be ready for patients within 90 days from the awarding of the contract.

American Congress on Internal Medicine.—The ninth annual clinical session of the American Congress on Internal Medicine will be held in Washington, D. C., March 9-14, 1925.

Washington clinicians and investigators of attainment will devote the entire session to amphitheatre and group clinics, ward "rounds," laboratory conferences, lectures, demonstrations of special apparatus and methods, and the exhibition of unusual scientific collections. Civilian and governmental services are united in the aim to make the week useful and memorable.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address inquiries to Frank Smithies, Secretary-General, 1002 North Dearborn Street, Chicago, Ill.

A Bill to Provide Better Treatment for Our Insane.—In line with recommendations of the Texas Eleemosynary Commission, Representative Wallace of Teague introduced a bill in the House, on January 26, providing for care of the insane.

The bill provides that names of state asylums and institutions be changed to hospitals, and that the Board of Control employ a director in the division of mental hygiene, whose salary shall be $7,500 a year.

The state hospitals are to be divided into hospital districts. Establishment of two psychiatric hospitals is proposed, one at Dallas and one at Galveston, to be under the jurisdiction of the Board of Control. Salaries of superintendents of the various hospitals would be fixed at $4,000 each annually.

These psychiatric hospitals would be for the treatment of nervous and mental diseases, and in addition, the Galveston institution would form a part of the teaching facilities of the medical branch of the University, while the Dallas institution would form a part of the teaching facilities at the Medical School of Baylor University.—*Fort Worth Star-Telegram.*

The American Association for Medical Progress.—The Friends of Medical Progress, a national lay organization incorporated in Boston, Massachusetts, in 1923, for the purpose of disseminating medical knowledge among the general public, is contemplating for the year 1925 a greatly extended program of service.

Office headquarters, formerly located in Boston, have moved to New York City, 370 Seventh avenue, where co-operation with the more important educational and health organizations will be facilitated. The society will hereafter be called the American Association for Medical Progress. Mr. Benjamin C. Gruenberg, well known to workers in the fields of education and public health, will take over the active management of the organization.

In the past year approximately 72,000 publications dealing with various phases of animal experimentation, vaccination, etc., have been distributed. An increasing number of similar publications is planned for the current year. A lecture program will be developed and attention will be focused on the formation of branch organizations throughout the country.

SOCIETY NEWS

Austin County Medical Society met at Bellville, December 16, 1924, at which time the following officers were elected for the ensuing year: President, Dr. O. E. Steck, Bellville; vice-president, Dr. John Kroulik, Nelsonville; secretary-treasurer, Dr. H. E. Roensch, Kenney; delegate, Dr. O. E. Steck; alternate, Dr. W. T. Brown, Wallis; censor, Dr. O. J. Knolle, New Ulm; committee on public health and legislation, Drs. J. A. Neely and O. E. Steck, of Bellville, and Theo Kubricht, Wallis.

Bexar County Medical Society met January 6, 1925, with 56 members and 4 visitors in attendance.

Dr. John T. Moore of Houston, read a paper on "A Discussion of the Present Status of the Treatment of Cancer of the Breast." He stated that there was a great need for earlier diagnosis in this condition, and that to secure early diagnosis both the physician and the laity must be educated. He mentioned the theories thus far advanced in the etiology of cancer. He concluded that no satisfactory cause for cancer had been found. Cancer occurs at all ages, although most frequently seen after the third or fourth decades. Cancer of the breast occurs in males in from one to two per cent of the cases. Heredity does not seem to play any very great role in the production of the disease. Traumatism seems to be an etiological factor in some cases, especially long standing irritation. Every lump in the breast should be considered cancerous until proved otherwise. Every woman should be taught to consult a competent physician when such a lump is found in her breast. Early cancer is often painless. A careful history of the case should be followed by examination of both breasts. Palpation of the breast should be as general as possible, as the disease has been disseminated by rough palpation. A case history is useful in differentiating inflammatory cancer from abscess.

Dr. Moore stated that some of the best observers believed that preradiation with *x*-ray and radium was detrimental in these cases, since healing was generally interfered with. He thought that Halstead had devised an operative technique for cancer of the breast that had not been improved upon. The operator should be prepared to complete the operation whenever he attempts to remove a lump from the breast. If there is the slightest suspicion of malignancy, sections should be examined by a competent pathologist. In most cases the surgeon should be able to make a positive diagnosis from the gross pathology, but when a pathologist is called in he should be treated as a real consultant and see the patient from a clinical standpoint. McCarthy's classification of tumors according to the amount of differentiation of cells, is a very practical one. Embryonic cells are always to be considered dangerous. If the infraclavicular and supraclavicular glands are palpable, the prognosis is more grave. *X*-ray studies should be made of the chest, bones, etc., for if the mediastinum is involved *x*-ray and radium treatment is preferable to surgery and will lengthen the patient's life.

Although Halstead always advised removing the pectoral muscles, Dr. Moore did not consider it necessary, as he had never seen the muscles involved. He removes the lymphatic bearing fascia, both anterior and posterior, but leaves the muscles. After a complete radical operation, radium should be implanted underneath the skin and subcutaneous tissue, and this should be followed by deep *x*-ray treatment. The röentgenologist must not be a coward; he should not be afraid to get an occasional skin burn (and this will occur at times if the area has been properly treated). The skin should be as brown as a berry after such treatment. One should not give up because there are recurrences after the operation. Dr. Moore has seen one case of seven years' standing, that had apparently been cured. Cancer of the breast is more fatal in the young than in the old, as the abnormal cell growth like the normal cell growth is then more active. Dr. Deaver has estimated that the average time elapsing between the beginning of malignancy and operative treatment is 30 months, surely a comment upon the lack of education of both the profession and the laity. In a British report on 12,000 cases of operation for cancer of the breast, it was noted that the prognosis after early operation was much better, that complete operation gave a better chance for cure, and that the average death from an unoperated case occurred three and a half years after the beginning of the tumor. Results in private cases are better because they usually consult their physician earlier.

Dr. J. W. Goode opened the discussion. He thought that one reason for early involvement of the axillary glands was the well-known fact that malignancy usually occurs in the upper and outer segments of the breast. He emphasized the early removal of a lump and considered this of far greater importance than the method of operation. He believed that John B. Murphy was one of the first who advocated not removing the pectoral muscles, as it was too late for a cure if they were involved. He began his axillary dissection first and then operated upon the breast, as in this way dissemination of the condition was better prevented and there was less shock to the patient.

Dr. C. S. Venable agreed with the essayist that the prognosis was very grave when the supra and infraclavicular glands were involved. He stated that the mediastinal metastasis often existed clinically, even though it could not be demonstrated by the *x*-ray. He had never seen such a case operated that was not hurried to her death. He believed that the pectoral muscles should be removed if such extension did take place by the fascia. He had recently seen a case in which there was lung metastasis, although the urine, and the axillary and supra and infraclavicular glands were not involved. He did not approve of subjecting a very old patient to a radical operation, as cancer in these cases is usually of low malignancy and a simple removal of the mass is usually sufficient.

Dr. C. C. Cade congratulated Dr. Moore upon not hesitating to use every measure at hand to help the patient, since some surgeons are so narrow as to advocate some methods to the exclusion of all others. He believed that Murphy had used the pectoral muscles to fill up the axilla, but he himself had never had sufficient courage to leave them.

Dr. Dudley Jackson stated that although preradiation renders the cancer cells less dangerous, at the same time it interferes with healing of other tissues, so that whether or not it should be used is still an open question. He thought that Dr. Moore should be given credit for blazing the trail in Texas, in the proper method of treating these cases. He had recently seen an inflammatory cancer in a woman at the menopause. Deep *x*-ray treatment had caused the breast to contract. He wondered if after radium needles had been used in this case it should still be operated, provided there was no mediastinal involvement.

Dr. B. F. Stout stated that Dr. Wood, of the Cancer Research Bureau of New York City, had found from working with rats, that palpation of a cancer is very dangerous but that no bad results would usually follow removal of a section for examination. and then completing the operation in a few days. A

competent pathologist must often be consulted, as certain types of malignancy cannot be diagnosed from a gross specimen alone. He had, during the past year, seen a case which appeared to be a metastasis from a gross examination, but which was shown by microscopic section to be one of advanced malignancy. Although Bloodgood has stated that one should be sufficiently trained to be able to make a correct diagnosis from the gross in nearly all instances, he should not forget that it was the microscope that enabled him to reach his high state of efficiency.

Dr. S. Burg stated that in former years he removed pectoral muscles in performing an operation for breast cancer, and has seen enormous swellings of the arm follow. He now removes a small area of the muscles with both anterior and posterior fascia and has never seen a bad result following this method, although he has under observation one case of five years and another of seven years after the operation.

Dr. I. S. Kahn stated that he has seen one or two cases of mediastinal involvement every year. It is a difficult matter to diagnose such involvements by *x*-ray, if only a few small glands are involved. When the growth becomes as large as an orange, making the diagnosis easy, it is then, of course, too late for operation. He advised taking serial *x*-ray pictures of the chest every two or three months and comparing these with any variation in the size of any suspicious area.

Dr. Moore, in closing, stated that he believed that the majority of operators now left the muscles, although it might be safer in the hands of unexperienced men to remove everything. In questionable cases the growth in the breast should be operated first, for diagnostic purposes, and then the axilla attacked if necessary. If one is sure of his diagnosis, however, the axilla should be attacked first. One sometimes sees lung metastasis early, and it is surprising how easily the highly trained röentgenologist can pick up these early cases. In the case reported by Dr. Dudley Jackson, he did not believe that it would be wise to break up the fibrotic bundle by operating, but thought it best to attack the growth with radium, both anteriorly and posteriorly. Cases in the aged can often be handled by radium in conjunction with the *x*-ray if the cancer cells are sealed up in a fibrous envelope by means of radium. They cannot get out and should not be disturbed by surgery. One should not try to use any one method to the exclusion of all others, but should use everything at his command, and should regard every lump in the breast at any age as a potential cancer—until it has been proved otherwise.

Cameron County Medical Society met at the Van Noy Cafe, Harlingen, January 14. Those in attendance were: Drs. Brown, Cash, Cole, Davidson, Hunter, Loew, C. W. and A. M. Letzerich, Sizer, Utley, Vinsant, B. M. and B. O. Works, Johnson, Watkins, Pollard and Spohn. The following visitors were also present: Drs. McCoy of Ohio, Osborn, Harrison, Webb, Whigham and McCann of the Hidalgo County Medical Society, and a number of ladies.

After readings by Mrs. McCoy and Miss McRee, and songs by Mrs. Calavo, the society held a business session while the ladies retired to organize an auxiliary. A paper by Dr. L. M. Maus was read by the secretary, in the author's absence. Dr. B. O. Works read a paper on "The Appendix, Its Medical and Surgical Treatment." Dr. W. E. Whigham read a paper entitled "Acidulated Whole Milk As a Routine Infant Food." Both of these papers enjoyed a liberal discussion.

A motion was adopted by the society that its meetings be held hereafter at Harlingen, unless a special invitation was received from the profession of some other town.

Dallas County Medical Society met December 11, 1924, with 103 members present.

A letter from Dr. Holman Taylor, secretary of the State Medical Association, was read, calling attention to the necessity of all members of the association impressing upon advertisers the importance of advertising in the JOURNAL. He also requested county secretaries to be more prompt in furnishing society news, obituaries, etc., for publication in the JOURNAL.

After the transaction of necessary business, the society proceeded with the election of officers, as follows: President, Dr. W. D. Jones; vice-president, Dr. J. S. Calhoun; secretary-treasurer, Dr. W. W. Fowler (re-elected); delegates, Drs. E. H. Cary and A. W. Nash; alternates, Drs. J. J. Terrill, T. M. Jarmon, F. A. Pierce and E. M. Lott; censor, Dr. J. H. Dorman.

Drs. A. J. Schwenkenberg and B. J. Berger were elected to membership.

DeWitt County Medical Society met in Cuero, December 17, with the following members present: Drs. L. W. Nowierski, H. C. Eckhardt, J. W. Burns, J. C. Dobbs, W. R. Gillette and B. J. Nowierski. Dr. Gillette Burns of Cuero, was present as a visitor.

The following officers were elected for the ensuing year: President, Dr. H. C. Eckhardt, Yorktown; vice-president, Dr. G. T. Reuss, Cuero; secretary-treasurer, Dr. B. J. Nowierski, Yorktown (re-elected); delegate, Dr. J. W. Burns, Cuero; alternate, Dr. H. H. Brown, Jr., Yoakum; censors, Drs. W. W. Sale and J. C. Dobbs of Cuero; committee on public health and legislation, Drs. J. W. Burns, J. C. Dobbs and J. R. Frobese.

Ellis County Medical Society met in the Hotel Rogers, Waxahachie, December 16, 1924, at which time the following officers were elected for the ensuing year: President, Dr. A. T. Hampton, Ferris; vice-president, Dr. J. T. Forehand, Bardwell; secretary-treasurer, Dr. Chas. A. Blind, Waxahachie (re-elected); delegate, Dr. S. H. Watson, Waxahachie; alternate, Dr. W. P. McCall, Ennis; censor, Dr. J. S. Terry, Ennis.

It was decided at this time that the meetings of the society would alternate between Waxahachie and Ennis, and that they would be held at high noon, at which time luncheon would be served.

Drs. W. C. Tenery, J. E. Jones and S. H. Watson were appointed as the program committee for the year.

Ellis County Medical Society met January 13 with 21 members and several visitors present. After a luncheon at the Palace Cafe, the following scientific program was rendered:

"The Treatment of Pneumonia," by Dr. R. B. Giles of Dallas—discussed by Dr. A. L. Thomas of Ennis.

"The Diagnosis and Treatment of Acute Tonsillitis," by Dr. Herbert Donell of Waxahachie—discussed by Dr. C. E. Gray of Ennis.

"Some Personal Glimpses Into the Life of Sir William Osler, the Physician and Philanthropist," by Dr. E. L. Gilcreest of San Francisco. Dr. Gilcreest is the son of Dr. J. E. Gilcreest of Ennis, and made his personal observations of Sir William Osler when he was stationed for several months, during the World War, at the hospital where Dr. Osler was carrying on his work.

Gonzales County Medical Society met in Gonzales, January 12, at which time the following officers were elected for the ensuing year: President, Dr. J.

B. Littlefield, Nixon; vice-president, L. Stahl, Gonzales; secretary-treasurer, Dr. W. T. Dawe, Gonzales; delegate, Dr. W. T. Dunning, Gonzales; alternate, Dr. W. T. Dawe.

Harris County Medical Society met January 3, 1925, with 35 members present.

Dr. Solomon David reported the case of a patient with a dislocation of the semilunar cartilage, which was discussed by Drs. F. L. Barnes, F. B. King, Graves, J. R. Bost, and J. E. Hodges.

Dr. H. L. Bartlett read a paper entitled, "On Being a Secretary, which was discussed by Drs. F. J. Slataper, Graves, F. L. Barnes, F. B. King, J. T. Moore, and J. E. Hodges.

Harris County Medical Society met January 10, with 46 members present.

Mr. Robert Cornell made an address on "The Coming of the World Ad Club Convention." He suggested that all donations to this cause be looked upon as an investment.

Dr. William Lapat read a paper entitled "Eye Injuries and the Determination of Their Amount of Permanent Disability," which was discussed by Drs. E. L. Goar, J. F. Gamble and W. G. Bryant.

Dr. J. L. White read a paper entitled "A Case Report of Syphilis of the Bladder," which was discussed by Drs. John M. Trible, Herbert Hayes, and John Turner.

Dr. Albert White read a paper on "Teamwork in the Practice of Medicine," which was discussed by Drs. E. F. Cook, A. E. Greer, S. C. Red, F. J. Slataper, A. H. Flickwir, O. L. Norsworthy, and William Strozier.

Harris County Medical Society met January 17, 1925, with 39 members present.

Dr. F. A. Waples read a paper on "A Timely Clinical Case," which was discussed by Drs. J. M. O'Farrell and B. F. Smith.

Dr. J. M. O'Farrell read a paper entitled "An Unusual Fracture Case in an Old Man," (illustrated), which was discussed by Dr. R. M. Hargrove.

Dr. B. F. Smith read a paper on "Two Lesions of Diagnostic Interest in the Cerebrospinal Nervous System," which was discussed by Drs. E. W. Applebee, A. E. Greer, L. F. Hodde, J. C. Michael, A. E. White, Jno. White, and J. M. O'Farrell.

Dr. Graves reported a case of kidney stone, which was discussed by Drs. W. Strozier, J. M. O'Farrell, J. T. White, Wm. Lapat, A. H. Flickwir, and A. E. White.

A committee was appointed to draw up suitable resolutions concerning the death of Mrs. Chas. C. Green.

Harris County Medical Society met January 24, 1925, with 61 members present.

Dr. R. T. Johnson gave a "Case Report of Triplets Diagnosed by *X*-ray Two Months Before Expected Date of Labor." Mrs. G. B. White, age 28, who was delivered spontaneously of a normal male child on December 13, 1923, came back for parental observation in August of this year, stating that her last period was June 22, 1924. Her present pregnancy had been uneventful until the previous two weeks when patient noticed that her feet became swollen at night and that she had shortness of breath. The physical examination was essentially normal, except for a very large abdomen, the fundus reaching almost to the xyphoid. On palpation, no definite information could be obtained, but on auscultation, two foetal hearts could be heard, with a difference in rate of 18 beats per minute. A röentgenogram showed skeletal outlines of three fetuses, so the diagnosis of triplets could be made. The case is reported because (1) the triplets were diagnosed two months before date of expected confinement; (2) from röentgenogram the children were seen to be alive, normal and approximately of seven months' gestation, and (3) to have the case on record so that a complete report can be given at a later date.

This case was discussed by Dr. W. G. McDeed.

Dr. T. O. Wooley read a paper on "Some Observations on Vaccination," which was discussed by Drs. Graves, J. E. Short, F. B. King, S. C. Red, L. J. Spivak, Wm. Strozier, E. N. Gray, Alvis Greer, F. J. Slataper, S. A. Foote and W. G. McDeed.

Hill County Medical Society has elected the following officers for the ensuing year: President, Dr. B. S. Smith, Hillsboro; vice-president, Dr. A. B. McPherson, Lovelace; secretary, Dr. Chas. A. Garrett, Hillsboro; delegate, Dr. F. D. Sims, Abbott; censor, Dr. J. A. Speer, Itasca.

Hunt County Medical Society met at Greenville, January 13, at which time the following officers were elected for the ensuing year: President, Dr. H. W. Maier, Greenville; vice-president, Dr. C. T. Bradford, Commerce; secretary, Dr. J. J. Handley, Greenville; censor, Dr. H. E. King, Greenville.

The Ladies' Auxiliary of the society served the members and visitors with a banquet, during which short addresses were made by Drs. C. M. Rosser and Leslie Moore of Dallas.

Johnson County Medical Society met at Cleburne, February 3, at which time the following officers were elected for the ensuing year: President, Dr. W. P. Ball; first vice-president, Dr. M. Dennis; second vice-president, Dr. J. M. Stallcup; secretary-treasurer, Dr. W. R. Washburn (re-elected); censor, Dr. R. L. Harris; delegate, Dr. J. D. Osborn; alternate, Dr. B. H. Turner, all of Cleburne.

Lamar County Medical Society met at the Gibraltar Hotel, Paris, December 4, with twenty members present.

The following officers were elected for the ensuing year: President, Dr. T. W. Buford, Minter; vice-president, Dr. J. R. Creed, Roxton; secretary, Dr. T. E. Hunt, Paris; censor, Dr. L. B. Palmer, Paris.

Lamar County Medical Society met at the Paris Golf Club, January 8, where as guests of Drs. Turner F. Roberts and M. A. Walker, they were served a splendid dinner. There were 30 members and visitors in attendance.

An invitation was extended to the members of the dental profession present, and who were members of the Dental Society, to become associate members of the medical society.

Mr. Robert Murphy, a leading druggist of Paris, read an excellent paper on "The Prescription," in which he gave the doctors some good points on prescription writing from the druggists' standpoint.

Dr. J. H. Black of Dallas, read an interesting and instructive paper on "Basal Metabolism," which was freely discussed.

Lavaca County Medical Society met at Yoakum, December 19, at which time the following officers were elected for the ensuing year: President, Dr. E. H. Marek, Yoakum; vice-president, Dr. J. D. Gray, Yoakum; secretary-treasurer, Dr. C. T. Dufner, Hallettsville; delegate, Dr. John Guenther, Moulton; alternate, Dr. C. L. Kopecky, Yoakum.

Potter County Medical Society met January 12, 1925, with the following members present: Drs. Caldwell, Keys, Marsalis, Johnston, Dutton, Crume, Wrather, S. P. Vineyard, Lumpkin, Lindsay, Latson, Petty, Bennett, G. T. Vineyard, Patton, Fuller. Dr. J. W. Reynolds of Dumas, was a visitor.

Mr. Walkup of the Amarillo Business Men's Association explained the function of that organization

and its value to its members, urging each physician to consider joining the association.

Dr. D. S. Marsalis read a paper on "Practical Value of Cystoscopy as An Aid to Diagnosis." He stressed the fact that very few symptoms arose from lesions at different points in the genito-urinary tract and that the symptoms of various lesions were very similar. Cystoscopy is the only positive way of making a correct diagnosis. The paper was discussed by most of the members present.

Dr. R. M. Bennett read a paper on "Our Surgical Technique." He emphasized the fact that surgeons should observe most scrupulously aseptic technique, and where this it not possible, antiseptic. Quite a thorough discussion followed.

The president appointed Dr. R. S. Killough as chairman and Drs. S. P. Vineyard and J. R. Wrather as members of the Educational Committee for the ensuing year.

Dr. L. K. Patton was elected censor for a period of three years.

Dr. H. D. Whittington was elected to membership.

Tarrant County Medical Society and the Woman's Auxiliary were entertained by the executive board of the Auxiliary, at the Medical Society Hall, on the evening of January 13. The hall was beautifully decorated with festooned vines, potted palms, and art baskets and wall-pockets of pink blossoms and ferns.

A reception was held for the newly elected officers of Tarrant County Medical Society, after which the lively tones of an orchestra lured many of the doctors and their partners out on the dance floor, while others found the bridge tables attractive. Refreshments in the form of dainty sandwiches and salads were served during the evening. The tea table, attractive in its silver and rose appointments, was graciously presided over by Mesdames C. E. Terrell, James Anderson, C. F. Clayton and T. C. Terrell. It is believed that this was the most largely attended entertainment ever given by the Auxiliary, and it was the consensus of opinion that such social functions should be enjoyed more often.

Tarrant County Medical Society met January 20, 1925. There was no regular scientific program, but Dr. Shelton Barcus presented three interesting clinical cases.

The first case was that of a white woman 70 years of age, who showed lesions with heavy crusts, over the trunk, legs, buttocks and left shoulder. The eruption was diagnosed as impetigo. This patient also showed symptoms of senile dementia. The case was discussed by Drs. Sydney Wilson, Heb Beall and W. G. Phillips.

The second case was that of a middle-aged white man, giving a history of traumatic spontaneous pneumothorax, acquired several weeks prior to being seen. *X*-ray plates were exhibited which showed a large collection of fluid in the pleural cavity. Dr. Barcus reported that a gallon and a half of bloody fluid had been removed from this pleural cavity. Dr. Potts, in discussing the case, brought out the fact that the prognosis is usually bad in these cases, tuberculosis being the most feared sequela. The case was further discussed by Drs. Heb Beall, T. C. Terrell and J. F. Spivey.

The third case was that of a young man 22 years of age, who appeared to have a case of myxedema of five or six years duration. The patient had been previously treated as a nephritic, but after the administration of five or six grains of thyroid daily for a week or more, he showed marked improvement. In addition to the usual symptoms of myxedema such as low mentality, lusterless hair and the general puffiness of the skin, this patient showed a marked symmetrical pigmentation on the dorsal surfaces of the hands, forearms and ankles; the skin was dry and scaly. The therapeutic tests had established the diagnosis in this case. The case was discussed by Drs. Heb Beall, M. E. Gilmore and F. S. Schoonover.

Dr. F. S. Schoonover reported the case of an aged white woman in whom the diagnosis of bladder stone had been made, but upon operation a calcified ovary had been found. The condition was further complicated by an old fracture of the neck of the femur. *X*-ray plates were exhibited. This case was discussed by Drs. R. S. Mallard, E. H. Bursey and C. F. Clayton, all being of the opinion that Dr. Schoonover was to be commended for revealing his error for the benefit of future cases.

Dr. T. C. Terrell requested all doctors having patients suffering from pellagra to furnish him blood specimens, as he and several others were doing some research work in an effort to find the causative organism of pellagra.

The following standing committees were appointed by the chair: Public health and legislation, Dr. J. H. McLean, chairman, (other members to be announced later); grievance committee, Dr. Lyle Talbot, chairman; Drs. C. P. Hawkins and Frank Sanders; membership committee, Dr. W. G. Phillips, chairman, Drs. E. H. Bursey and J. P. Lee; permanent home committee, Dr. W. L. Allison, chairman, Drs. Holman Taylor, T. C. Terrell and W. R. Thompson; program and scientific work, Dr. Shelton Barcus, chairman, Drs. C. H. McCollum and Joseph White.

The chairman of committees for the bimonthly clinics were also appointed as follows: General chairman, Dr. Sidney Wilson; chairman of medicine, Dr. Will Horn; chairman of surgery, Dr. Jack Daly; chairman of pediatrics, Dr. E. G. Schwartz; chairman, eye, ear, nose and throat, Dr. C. P. Schenck.

Tom Green County Medical Society met in San Angelo, January 5, with 26 members and visitors in attendance.

Dr. H. K. Hinde, newly elected president of the society, gave an interesting talk on the importance of coöperation of members, and their keeping faith with one another.

Dr. Joe Dildy of Brownwood, councilor for the district, addressed the society in his characteristic and forceful manner.

Dr. T. Richard Sealy of Santa Anna, president of the Fourth District Medical Society, read a paper on "Diagnosis of the Acute Surgical Abdomen," which was discussed by Drs. Chambers, Dildy, Hixson, Godby and others.

Dr. J. S. Hixson reported an interesting case of a streptococcic infection treated intravenously by mercurochrome, in which the temperature showed a range up to 110 degrees in eight hours.

Upshur County Medical Society met in Gilmer, December 12, 1924, with the following members in attendance: Drs. J. G. Daniels, J. C. Winn, W. H. Buchan, H. J. Childress and T. S. Ragland of Gilmer; W. H. Hyde and F. Coslett of Big Sandy; G. A. Taylor of Bettie; A. J. Childress of Ore City; P. D. Reynolds of Rosewood, and W. S. Thornton of Thomas.

The following officers were elected for the ensuing year: President, Dr. F. Coslett; vice-president, Dr. W. H. Buchan; secretary-treasurer, Dr. J. G. Daniels; delegate, Dr. W. H. Hyde; alternate, Dr. J. G. Daniels.

Van Zandt County Medical Society met at Canton, January 2, with nine members and one visitor present.

Dr. Frank L. Lee of Ben Wheeler, reported a case of doubtful appendicitis, accompanied by gas distention, pain and constipation.

Dr. Ben B. Brandon of Edgewood, read a paper entitled "Diathermy," which was generally discussed.

Wichita County Medical Society met at the Wichita Club rooms, January 13, with the following members in attendance: Drs. O. B. Kiel, Q. B. Lee, Geo. L. Singleton, F. R. Collard, H. D. Prichard, J. W. Powers, A. D. Terrell, R. H. Graham, J. A. Heyman, Everett Jones, F. S. White, M. A. Beckman, A. D. Patillo, J. B. Nail, A. F. Leach, R. B. Wolford, C. W. Stevenson, M. H. Glover, W. L. Parker and W. P. Lowry of Wichita Falls; T. H. Parmley and W. H. Ogden of Electra, and T. P. Lynch of Iowa Park.

Dr. J. A. Heyman of Wichita Falls, read a paper on "The Acute Abdomen," which was freely discussed.

Dr. Austin F. Leach of Wichita Falls, read a paper on "Monoxide Gas Poisoning."

South Texas District Medical Society will meet at Beaumont, April 9-10, 1925, and a large attendance is expected. The following section officers have been appointed:

Surgical Section: Chairman, Dr. D. S. Wier, Beaumont; secretary, Dr. J. H. Dameron, Orange.

Medical Section: Chairman, Dr. B. F. Smith, Houston; secretary, Dr. A. W. White, Houston.

Dr. Ollie Hodges of Beaumont was appointed chairman of the golf tournament.

A consideration of the names of these officers should convince those expecting to attend this meeting that a good program will be presented. This society has, in fact, quite an enviable reputation for always presenting good programs. Those who do not attend will be distinctly the losers.

The Twelfth District Medical Society met at the Raleigh Hotel, Waco, January 13, 1925.

The following scientific program was rendered: "Pain in the Upper Abdomen," Dr. Chas. A. Garrett, Hillsboro—discussed by Drs. Shell and Scott, Jr.; "The Use of Pituitrin in 100 Cases of Obstetrics," Dr. M. T. Knox, Cleburne—discussed by Drs. Morgan, Speer and Roddy; "A Preliminary Report of Radiation for the Control of Hypertrophied and Inflamed Naso-Pharyngeal Lymphoid Tissue," Dr. J. B. Johnson, Temple—discussed by Drs. Hutchins, Jones, Jenkins and Geo. S. McReynolds; "Pyloric Stenosis in Infants," Dr. Homer B. Jester, Corsicana—discussed by Drs. Dudgeon, Sherwood and Talley; "Three Types of Goitre" (lantern slides), Dr. E. O. Rushing, Dallas; "Record Histories of Some Interesting Cases, With End Results," Drs. J. W. Torbett, Edgar Hutchings and Howard Smith of Marlin—discussed by Dr. W. D. Jones of Dallas; "Frequent Mistakes in the Diagnosis of Epilepsy," Dr. E. R. Carpenter, Dallas—discussed by Drs. Ellis and Green; "A Study of Impacted Uretral Stone, A Report of Three Operated Cases," Dr. M. W. Sherwood, Temple; "The Responsibility of the General Practitioner in Cataract and Glaucoma," Dr. John O. McReynolds, Dallas; "Referred Pain of Intra-Nasal Diseases Met by the General Man and the Specialist," Dr. J. C. Ellis, Houston—discussed by Dr. Geo. S. McReynolds; "A Few Points That Might Aid the General Practitioner in Diagnosing Diseases of the Eye, Ear, Nose and Throat," Dr. W. D. Jones, Dallas—discussed by Drs. Buie, Aycock and Ellis; "The Raise in Dues for Membership in the State Medical Association," Dr. N. D. Buie, Marlin; "Tic Douloureux," Dr. Doyle L. Eastland, Waco; "The Relation of Gall-Bladder Disease to Other Abdominal Affections," Dr. W. T. Shell, Corsicana—discussed by Drs. A. C. Scott, Sr., and J. W. Torbett; "The Value of Spinal Anesthesia in Urology," Dr. R. S. Mallard, Fort Worth—discussed by Drs. Simpson, Wood, Dudgeon and Scott, Sr.; "Pyelitis," Dr. C. W. Simpson, Temple—discussed by Drs. Torbett, Etter and Mallard.

The society then went into business session, at which time the following officers were elected for the ensuing year: President, Dr. W. T. Shell, Corsicana; secretary, Dr. Doyle L. Eastland, Waco.

A motion endorsing the raise in dues of the State Medical Association was unanimously adopted, as was also a motion that hereafter the society should hold a two-days' session instead of trying to condense the meeting into a single day.

The doctors of McLennan county entertained the visiting doctors and their wives with a banquet at the Raleigh Hotel, at 6:30 p. m.

The Woman's Auxiliary of the society was entertained by an attractive program at the home of Mrs. W. A. Wood, following which Mrs. J. O. McReynolds of Dallas, president of the State Woman's Auxiliary, outlined the program for securing a pure milk and water supply over the State, and urged that the ladies of all component auxiliaries participate actively in this movement.

Mrs. W. A. Wood then read a history of the organization of the Woman's Auxiliary and outlined the five-years' work done by them.

The following officers were elected for the ensuing year: President, Mrs. H. R. Dudgeon, Waco; first vice-president, Mrs. G. V. Brindley, Temple; second vice-president, Mrs. Ben C. Smith, Hillsboro; third vice-president, Mrs. W. T. Shell, Corsicana; fourth vice-president, Mrs. O. T. Bundy, Marlin; secretary-treasurer, Mrs. Lee Knight, Temple; publicity chairman, Mrs. F. F. Kirby, Waco.

The meetings of both the Auxiliary and the Society were unusually well attended.

Cleburne was chosen as the next meeting place, and the date was set for July, 1925.

Fort Worth Medical and Surgical Clinics were held January 15, 1925. In the forenoon operative clinics and ward walks were held at the various hospitals. An appetizing luncheon was served at 12:30 at the Medical Society Hall, by a committee of the Woman's Auxiliary. After an enjoyable musical program, Dr. Wm. Engelback of St. Louis, was introduced and gave an extremely interesting lecture on "Diagnosis and Treatment of Endocrine Disorders," which was illustrated by numerous well selected lantern slides.

Dr. Robert H. Millwee of Dallas, then read a paper entitled "A New Theory of the Cause of Cancer." Both of these papers brought forth a liberal discussion.

Dr. Chas. F. Clayton, the newly elected president of Tarrant County Medical Society, outlined his policy for the year, especially in regard to the bi-monthly clinics. He urged that these clinics be considered not as belonging to Fort Worth alone, but to all of Northwest Texas. Despite the unusually bad weather, quite a few out-of-town physicians were present, Dr. B. L. Jenkins having come all the way from Clarendon to attend the clinics.

Tri-State Medical Society met at Shreveport, Louisiana, January 14, 15. Nearly 200 doctors from Arkansas, Texas and Louisiana attended the sessions of the society and enjoyed the ususually attractive program.

The following officers were elected for the ensuing year: President, Dr. J. A. Hendrick, Shreveport, Louisiana; vice-presidents, Drs. H. C. Irion, Benton, Louisiana; R. Y. Phillips, Malvern, Arkansas; Charles R. Carter, Dallas, Texas; secretary, Dr. Frank H. Walke, Shreveport, Louisiana; councilors, Drs. B. M. McKoin, Monroe, Louisiana; G. A. Hayes, Texarkana, Arkansas, and V. R. Hurst, Longview, Texas.

Marshall, Texas, was chosen as the next place of meeting.

CHANGES OF ADDRESS.

Dr. C. F. Sheppard, from Bivins to Point.
Dr. E. R. Middleton, from Winters to Abilene.
Dr. B. F. Chambers, from Tyler to Port Arthur.
Dr. W. C. Moore, from Presidio to Marfa.
Dr. Chas. W. Castner, from Rusk to San Antonio.
Dr. John Coleman Stiles, from Detroit to Dallas.
Dr. C. H. Standifer, from Arlington to Dallas.
Dr. W. T. Malone, from Luling to Wortham.
Dr. G. E. Glover, from Refugio to Sugarland.
Dr. H. E. Lancaster, from Lockhart to Beeville.
Dr. Donald McKay, from Flatonia to Austin.

DEATHS

Dr. E. H. Gray died at his home in San Antonio, December 24, 1924, after an illness from angina pectoris of four weeks.

Dr. Gray was born at Vicksburg, Mississippi, August 23, 1863. He graduated from the Memphis

DR. E. H. GRAY.

Medical College in 1888. He began practicing medicine at Rockdale, Texas, later moving to Rogers and then to Milano, where he practiced for thirteen years. He accepted the appointment of Chief of the Medical Staff of the Southwestern Insane Asylum under the administration of Governor Tom Campbell, and also served as Assistant Superintendent of the State Asylum at Austin, under the administration of Governor Chas. Culberson. Since then, he has been actively engaged in the practice of medicine in association with Dr. F. M. Haggard at San Antonio, and was surgeon there for the I. & G. N. Railroad. In 1886, he married Mrs. Mary E. Thweatt at Rockdale, Texas. He was at one time Master of Lodge No. 414, A. F. & A. M., at Rockdale. He was an active member of the Christian Church and took an interest in all civic movements. He had been a member for many years of the State Medical Association and of Bexar County Medical Society. Resolutions of sympathy were adopted by his county society, which state in part:

"The people of San Antonio have lost one of their most honorable and noble citizens in his death. Especially will the families among whom were his clients, miss his wonderfully delightful companionship, his splendid personality and his sincere native honor that formed so large a part in his personal character. His patients will miss his professional service, even as we miss his companionship from our lines."

Dr. Gray was buried at Rockdale, Texas, beside a daughter who had passed away some twenty years ago. The services at the grave were conducted by Rockdale Lodge No. 414, A. F. & A. M. He is survived by his wife and a stepdaughter and son, Mrs. Jas. M. Lewis of Los Angeles, California, and R. E. Thweatt of Milano, Texas, several grandchildren and a brother, Mayor James Gray of Caldwell, Texas.

Dr. Hiram M. Phillips died at his home in Terrell, December 23, 1924, following an illness of two weeks.

Dr. Phillips was born in Milam, Tennessee, in 1870, where he received his early education. He secured his degree in medicine from the Dallas Medical College in 1903, and practiced for a number of years at

DR. H. M. PHILLIPS.

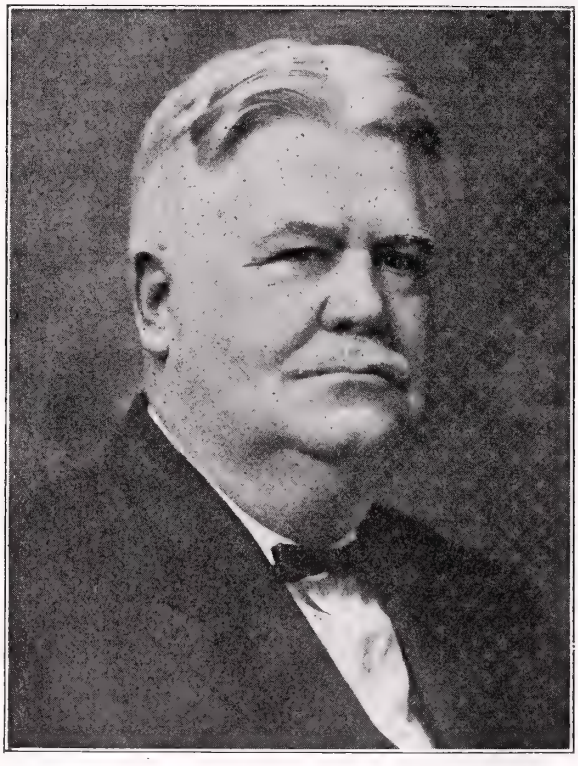
Kaufman, Texas. In 1908, Dr. Phillips took a postgraduate course in the eye, ear, nose and throat, at Tulane University, following which he specialized in that work. He moved to Terrell in 1918, where he

built up a splendid practice and made many strong friends both in and out of his profession.

Dr. Phillips was a consistent member of the Methodist Church, a member of the Yeomen, Woodmen and Praetorian Lodges, and an active Rotarian. He was an enthusiastic supporter of organized medicine, having been a member of the Kaufman County Medical Society since its organization, and at one time serving as its president. He is survived by his wife and one son, and several brothers and sisters.

Dr. William Beverley West died at his home in Fort Worth, December 26, 1924, following a protracted illness.

Dr. West was born January 30, 1860, at Westland, Virginia. He was the son of Captain Francis Thornton West, a prominent Mexican War veteran, and Miss Addie M. Chiles, great granddaughter of Edmund Randolph, first Attorney General of the United



DR. W. B. WEST.

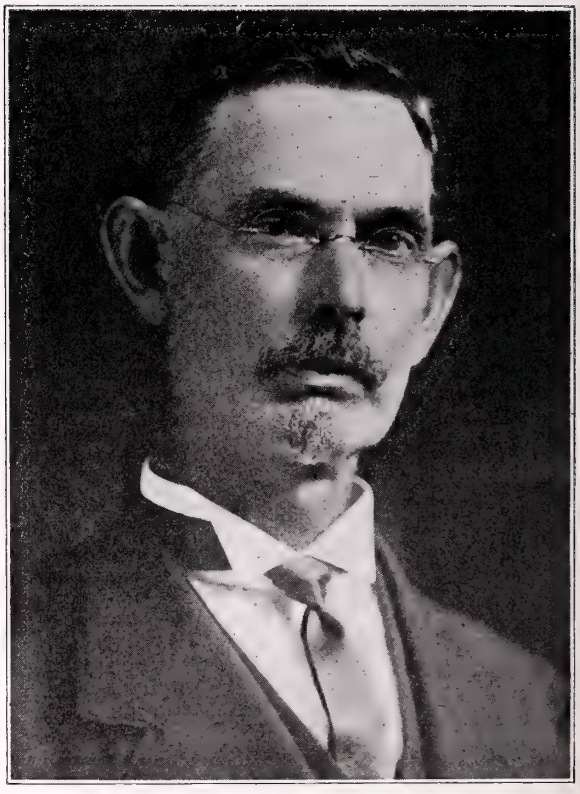
States. He was a descendant of Thomas West, an early Governor of Virginia. He was educated at Randolph Macon College and took his degree in medicine from the College of Physicians and Surgeons at Baltimore, in 1885. In 1889 he came to Fort Worth, where he practiced medicine up to a short time of his death. He was a charter member of the Tarrant County Medical Society, and at one time served as president of that organization. He served as President of the Board of Health, and was City Physician from 1890-92. He was a charter member of the faculty of the Fort Worth Medical College, first filling the chair of Diseases of Children, and later that of Genito-Urinary and Rectal Diseases. During the World War, Dr. West served as a member of the local Medical Examiners Board, and was a member of the Volunteer Service Medical Corps and Council of National Defense. He had been a member of the Texas State Medical Association and of the American Medical Association for many years, filling many important offices and places on committees in both organizations. He was a member of the Kappa Alpha and the Phi Chi Fraternities.

Dr. West was a member of the Episcopal Church, and was a Thirty-second Degree Mason. Not only was he prominent in medical circles, but he was one of Fort Worth's outstanding citizens, ever taking a deep interest in civic affairs and always ready to bear his full share of community burdens.

Dr. West married Miss Alice Mensing of Galveston, October 21, 1896. To them was born three sons, Thomas Fendol, William Beverly, Jr., and Mensing; and one daughter, Josephine Alice. Dr. West is survived by his widow and four children; a bother, Frank T. West of Westland, Virginia; two sisters, Mrs. Alice W. Allen of Columbia, S. C., and Mrs. H. W. Harper of Austin, and two grandchildren, William Beverley III, and James Moore West.

Dr. L. K. Tainter of Fredericksburg, Texas, died January 18, 1925, in the Secor Hospital, at Kerrville, Texas.

Dr. Tainter was born at Fairbanks, Iowa, October 29, 1859. He received his early education in the schools of Keokuk, Iowa, and his medical education at the St. Louis Medical College (now the Washing-



DR. L. K. TAINTER.

ton University, of St. Louis, Mo.), graduating from that institution in 1886. After first practicing medicine for eight years in Iowa, he moved to Fredericksburg, Texas, where he had practiced for 31 years at the time of his death. Dr. Tainter had for many years been a member of his county medical society, the State Medical Association and of the American Medical Association. He at one time served as County Health Officer of Gillespie County.

Dr. Tainter married Miss Helen Baker of Olewein, Iowa, December 12, 1888. It was said of him, "Indeed, loyalty was an outstanding feature in the

make-up of this high-minded citizen—loyalty to his country, loyalty to his fraternity, and above all, loyalty and loveableness in his home. We mourn because a life like his must end; we glory in the attainment that was his."

Dr. Tainter is survived by his widow, and by two brothers, E. B. and A. L. Tainter, and one sister, Mrs. Myra Nickols.

Dr. R. A. Johnson of Flatonia, died at his home, October 24, 1924, following an illness of several months.

Dr. Johnson was born at Palmyra, Missouri, August 14, 1839, in the schools of which community he received his early education. He taught school at the age of 19, studying medicine in the meantime, and at the age of 21 began practicing. He came to Texas in 1859, locating at Hallettsville, Lavaca County. In 1860, he was married to Miss Gabriella Zumwalt, to which union nine children were born.

Dr. Johnson served throughout the Civil War, in the cavalry brigade commanded by General Marmaduke. He received his degree in medicine from Tulane University, March 4, 1888. He practiced in Hallettsville, Texas, for 18 years, from which place he moved to Flatonia, where he continued to practice until the time of his death. He is survived by his wife, two daughters and three sons.

BOOK NOTES

Clinical Aspects of the Electrocardiograms. A Manual for Physicians and Students. By Harold E. B. Pardee, M. D., Associate in Medicine, Cornell University Medical School; Assistant Attending Physician, New York Hospital; Consulting Cardiologist, Lying-In Hospital and Woman's Hospital, New York City. 8 vo., Cloth, 236 pages, 56 illustrations. Price, $4.00 net. Paul B. Hoeber, Inc., Publishers, New York City, N. Y.

This book takes up the history and fundamental principles upon which the electrocardiograph is based, and then describes the method by which the heart is studied with this intricate instrument. The text is made much more valuable by numerous well printed original electrocardiograms showing both the normal and the abnormal. Especially interesting is the study of heart block and auricular fibrillation. The electrocardiogram furnishes the solution of many interesting problems in the study of cardiac disease. It has been said that "Intelligent use of * * * electrocardiograph makes one a better clinician and diagnostician, able to administer one's remedies more rationally and to foretell more definitely the outcome of disease." Those interested in the study of the heart, and especially by the electrocardiograph, will find this monograph exceedingly valuable.

The Pathology and Treatment of Diabetes Mellitus. By George Graham, M. A., M. D., F. R. C. P., First Assistant in the Medical Clinic, St. Bartholomew's Hospital; Physician, Royal Northern Hospital. 12 mo., Cloth; 188 pages, illustrated. Price, $2.00 net. Oxford University Press, American Branch, New York City, N. Y.

It is rather remarkable how much pertinent information concerning the etiology and treatment of the much discussed disease, diabetes mellitus, is contained in so small a volume. While giving a great deal of original work, the author has been careful to include the opinions of his contemporaries. The bibliographies given at the end of each chapter must surely contain the name of every individual who has really contributed anything to this subject, judging from the imposing list of names. It is interesting to note that the author is not so ready as some clinicians to reject those methods and theories which have long been accepted empirically but for which scientific proof cannot always be furnished. For example, the author believes that in diabetic coma and severe toxaemia, that the administration of alkalies serves a valuable purpose, because the alkali reserve of the blood is increased, thus aiding both in the neutralization of the aceto-acetic acid in the blood, and in the elimination of this dangerous product. The insulin treatment is described and interesting observations are made thereon. The volume concludes with several appendices, containing the "Ladder Diet" as used in the Medical Clinic of St. Bartholomew's Hospital, charts giving food values, laboratory methods of blood-sugar and urine determinations, etc. This little volume is certainly well worth the very moderate price asked.

Human Constitution. A Consideration of its Relationship to Disease. By George Draper, M. D., Associate in Medicine at Columbia University, New York City. 8 vo., Cloth; 345 pages, 208 illustrations and 105 tables. Price, $7.50 net. W. B. Saunders Company, Philadelphia and London, 1924.

In this volume the author has entered comparatively unexplored territory. Just what the benefit to medical science, and hence to humanity, will be, is a story which must be written in the future. At any rate, he gives the reader something to think about, and opens up a new field for investigation. As the author infers, the literature on this subject is for the most part conspicuous by its absence. He has devised a number of instruments for accurately measuring the distances between certain anatomical landmarks, in addition to using many instruments invented by others. He has plotted these measurements in order to show graphically a comparison of measurements for certain types of individuals. For example, it is well known that some diseases are more common in certain races; just what the constitutional difference is which makes one group of individuals more susceptible to certain diseases is one of the principal objects of the author's endeavor. In his conclusion, however, he states that, "It is sincerely to be hoped that no misunderstanding of the argument will cloud the issue or give rise to the thought that because the individual possesses a given anatomic panel, that therefore he must develop a given malady. * * * A study of human beings then, grouped according to disease potentialities, leads to a sort of comprehension of man's quality which may do much to develop preventive medicine for the individual."

Hygiene and Health. By Charles P. Emerson, M. D., Dean and Professor of Medicine, Indiana University School of Medicine, and George Herbert Betts, Northwestern University, Evanston, Illinois. In two 12mo. volumes. Cloth, illustrated.

Book One contains 210 pages and is intended for younger children. The purpose of the book is stated by the authors in the following language: "This book stresses hygienic practice above all else, but does not fail to give the underlying facts and explanations for which the child's mind is at this stage ready, and which his curiosity demands. While immediate habits of right living are the great aim sought, the pupil is, step by step, led to an intelligent understanding of his own body and the laws governing its welfare." In Book Two, comprising 255 pages, the same idea is continued, but more informa-

tion is given concerning anatomical and physiological functions, a constant effort being made not to present these facts as "an end in themselves," but to teach the child the importance of observing certain rules in hygiene, whose importance a knowledge of anatomy and physiology will teach him. It is believed that these books will prove very valuable in accomplishing the author's purpose of making "our schools effective instruments for raising the general level of efficiency of our people."

The Principles and Practice of Obstetrics. By Joseph B. DeLee, A. M., M. D., Professor of Obstetrics in the Northwestern Medical School. Fourth Edition, thoroughly revised. 8 vo., Cloth; 1,123 pages, 923 illustrations, 201 of which are in colors. Price, $12.00 net. W. B. Saunders Company, Philadelphia and London.

Few books have attained such high esteem in so short a space of time; when this volume first appeared in 1913, it received immediate recognition, and has since become one of the classics in medicine. The author states in his original preface that the volume is an outgrowth of a book written by him entitled "Notes on Obstetrics," and used for fourteen years as a text-book at the Northwestern University Medical School. This last edition contains much new subject matter, especially in those sections dealing with Hyperemesis Gravidarum, Eclampsia, Abruptio Placentae, Syphilis, Heart Disease, Use of the *X*-ray, and Operative Obstetrics. As in the previous editions, this volume is divided into four principal parts: The Physiology of Pregnancy, Labor, and the Puerperium. The Conduct of Pregnancy, Labor and the Puerperium; Pathology of Pregnancy, Labor and the Puerperium, and Operative Obstetrics. The illustrations are for the most part original, having been drawn from fresh specimens under supervision of the author, and from original photographs. The volume is based on a large obstetrical experience covering a period of thirty-two years. The opinions of other obstetricians, as well as those of the author, are given where there is any disagreement as to methods of procedure. The author contends strongly for his position that pregnancy is a *pathological* and not a *physiological process*, at least as modified by our present civilization. This belief is stressed in order that more careful consideration may be given by both the practitioner and the public to this great division of medicine—than which there is none more important nor requiring greater knowledge and skill. To Dr. DeLee, womankind owes an everlasting debt of gratitude, for his insistence that the frightful maternal and fetal mortality in childbirth can and must be materially reduced. Of the debt owed him by the profession nothing can be added to the above sentence, for, after all, the interests of the physician and the public are so intimately related that in the final analysis they are the same.

Collected Papers of the Mayo Clinic and the Mayo Foundation. Edited by Mrs. M. H. Mellish. Volume XV, 1923. 8 vo., Cloth; 1,377 pages, 410 illustrations. Price, $13.00 net. W. B. Saunders, Philadelphia and London, 1924.

The work is divided into the following principal classifications: Alimentary Tract; Urogenital Organs; Ductless Glands; Blood and Circulatory Organs; Skin and Syphilis; Head, Trunk, and Extremeties; Brain, Spinal Cord, and Nerves; Technique, and General Miscellaneous. This volume is "a complete reference record of all papers for the year 1923, from the Mayo Clinic and Mayo Foundation, every such paper being published therein, complete, abridged, abstracted, or by title." As stated in the foreword, "The present volume marks a radical departure from the policy previously pursued. * * * Last year the two volumes netted more than 2,100 pages, and all reference to more than fifty papers was omitted." The list of contributors is so long (there are 148 of them) that it cannot be included in these columns. This volume, like its predecessors, will be a valuable addition to any medical library.

Local Anesthesia, Its Scientific Basis and Practical Use. By Professor Dr. Heinrich Braun, Obermedizinalrat and Director of the K.G.L. Hospital at Zwickau, Germany. Translated and Edited by Malcolm L. Harris, M. D., Professor of Surgery, Chicago Policlinic; Chief Surgeon, Alexian Brothers Hospital; Surgeon to the Henrotin, Policlinic and Passavant Hospitals, Chicago, Illinois. Second American Edition, Translated from the Sixth Revised German Edition. 8 vo., Cloth; 412 pages, 231 illustrations, some in colors. Price, $5.00. Lea & Febiger, Philadelphia and New York, 1924.

To those desiring a comprehensive volume on local anesthesia, this book is heartily recommended. The history of local anesthesia is first taken up in a very interesting and authoritative manner. Next are considered the mechanical and physical methods of securing local anesthesia, such as nerve compression and the application of extreme cold. The various drugs for the production of local anesthesia are thoroughly discussed and many accepted authorities are quoted, besides much original work done by the author himself. The methods of securing local anesthesia and the technique necessary in each of these methods are described in detail. Exactly half of the book (200 pages) is devoted to a very careful description of the technique used in local and regional anesthesia in special regions. The main chapter headings of this division are: Operations on the Head; Operations on the Neck; Operations on the Spinal Column and Thorax; Abdominal Operations; Genito-Urinary and Rectal Operations, and Operations on the Extremities. No pains seem to have been spared in the writing of this book, and one cannot but be impressed with the profound knowledge of the literature of the subject demonstrated by the author. The binding and printing are excellent, and typographical errors few. The illustrations are clear and instructive; they are for the most part photographic. Where diagrams are used, these are anatomically correct as well as artistic. The volume is certainly a valuable contribution to the literature on local anesthesia.

Genito-Urinary Diseases and Syphilis. By Henry H. Morton, M. D., F. A. C. S., Professor of Genito-Urinary Diseases and Syphilis in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island College Hospital, etc. Fifth Edition, Revised and Enlarged. 8 vo., Cloth; 712 pages, 238 illustrations and 38 full page colored plates. Price, $10.00. Physicians & Surgeons Book Company, New York, 1924.

This valuable work on diseases of the genito-urinary system is so well known that no extensive discussion in these columns seems necessary. The latest diagnostic methods in genito-urinary work are discussed in detail in the author's usual clear and succinct manner. Especially valuable are the chapters on Radiography, Pyelography, Cystoscopy and Urethroscopy. The color plates showing the pictures as presented by the Cystoscope and Urethroscope are the finest we have seen. The cuts made from radiograms are also unusually clear. In fact, it may be said that the illustrations in general are excellent. The last 140 pages of the book are devoted to the subject of syphilis, giving a very complete descrip-

tion of its various forms, and methods of diagnosing and treating the disease. There is an appendix containing copies of instruction charts to be given patients suffering from venereal diseases, and also copies of forms for case history and laboratory reports as well as formulae and technique used in certain special stains. Extensive bibliographies follow the principal divisions of the book, enabling those who so desire, to follow up the literature quoted by the author. Special sections have been written by Drs. Archibald Murray, Carl H. Laws, Alfred L. L. Bell, Alfred Potter, Lewis C. Johnson and Albert M. Judd.

Operative Surgery, Covering the Operative Technic Involved in the Operations of General and Special Surgery. By Warren Stone Bickham, M. D., F. A. C. S., former Surgeon in Charge of General Surgery, Manhattan State Hospital, New York; former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six octavo volumes, totaling approximately 5,400 pages with 6,378 illustrations, mostly original, and a separate Desk Index Volume. Volume VI, completing the set, contains 989 pages, with 1,224 illustrations. Cloth; $10.00 per volume. Sold by subscription only. Index Volume free. W. B. Saunders Company, Philadelphia and London, 1924.

Previous volumes of this masterful and comprehensive work on operative surgery have been reviewed in these columns. It is with pleasure that the receipt of Volume VI and the Index Volume, completing the set, is acknowledged. This concluding volume is fully up to the high standards set by its predecessors, which statement leaves little to be said. The technic of various operations is clearly and minutely described, and where illustrations are necessary, excellent plates are provided. This great work of Dr. Bickham is a worthy successor to his original popular treatise on surgery, which comprised but a single volume.

Diseases of Middle Life. The Prevention, Recognition and Treatment of the Morbid Processes of Special Significance in the Critical Life Period, comprising twenty-two original articles by various eminent authorities. Edited by Frank A. Craig, M. D., Associate Director of the Clinical and Sociological Department of the Henry Phipps Institute of the University of Pennsylvania. In two octavo volumes; Cloth. Price, $15.00. Over 1,800 pages, illustrated. F. A. Davis Company, Philadelphia, Pa., 1924.

This work on Diseases of Middle Life is the first of its kind to come to our attention, and it appears to be a very capable and bold pioneer. A glance at the long list of contributors whose names are familiar to the average practitioner of medicine and who are acknowledged to be authorities in their special fields, will at once convince the reader that here is a work on medicine that he can read with both profit and pleasure. The diseases of middle life, of course, include practically all the diseases to which mankind is heir, except those peculiar to childhood. However, there are many diseases which usually make their appearance in the middle decades, and it is upon these diseases that special emphasis is laid. In a work contributed by various authors, there is necessarily some overlapping in the different special fields of medicine; for example, the subject of Raynaud's Disease is treated under both the section on Nervous and Mental Diseases, and that on Diseases of the Skin. However, since the disease is looked at from a slightly different angle by the representatives of these two great medical specialties, a more comprehensive idea of the subject is given than if it were treated from only one viewpoint.

The section on the heart and vascular diseases is especially instructive, as is also that on arterial sclerosis and hypertension and other closely related subjects. The work is strictly modern, giving the latest views on both diagnosis and treatment. The reader may not agree with all of the hypotheses advanced by the different authors nor with their opinion at all times, but he cannot but be struck with the scientific manner in which each of the contributors has approached his subject, and the originality and freshness of the many practical observations made. The binding and printing are excellent and the illustrations are graphic and well selected. There appear to be very few typographical errors. On page 112 of Volume II, a paragraph on "Bran Gems" seems to be repeated.

It is believed that this work on diseases of middle life will receive an enthusiastic reception.

Applied Pathology in the Diseases of the Nose, Throat and Ear. By Joseph C. Beck, M. D., F. A. C. S. Associate Professor of Laryngology, Rhinology and Otology, University of Illinois College of Medicine; Chief of Staff, Otolaryngology, North Chicago Hospital, Chicago. 8vo., Cloth; 280 pages, 268 original illustrations, including 4 colored plates. Price, $7.50. C. V. Mosby Company, St. Louis.

Diseases of the nose, throat and ear are discussed with special reference to pathology. The book is divided into two parts, part one deals with Acute Diseases, and part two with Chronic Diseases. Part One is divided into 7 chapters, as follows: Acute Diseases of the Nose; Acute Diseases of the Pharynx; Mesopharynx; Acute Diseases of the Larynx; Acute Diseases of the Trachea; Acute Diseases of the Ear, and Acute Complications of Mastoiditis. Part Two is divided into 5 chapters, as follows: Chronic Diseases of the Nose; Nasopharynx and Oropharynx; Chronic Diseases of the Larynx; Chronic Diseases of Trachea, Bronchi and Esophagus, and Chronic Diseases of the Ear. The book is printed on excellent paper and with large type, which greatly facilitates reading. The numerous excellent illustrations assist greatly in conveying the author's thought to the reader. There are many microphotographs showing the histology of the affections described, as well as photographs and cuts of gross specimens.

Obstetrical Nursing. A Manual for Nurses and Students and Practitioners of Medicine. By Charles Sumner Bacon, Ph. B., M. D., Professor of Obstetrics, University of Illinois and Chicago Policlinic; Medical Director, Chicago Lying-In Hospital and Dispensary; Attending Obstetrician to the University, Chicago Policlinic, Henrotin, Grant and Evangelical Deaconess Hospitals, Chicago, Illinois. Second Edition, thoroughly revised, 12 mo., Cloth; 340 pages, 126 engravings. Price, $2.75 net. Lea & Febiger, Philadelphia and New York, 1924.

This book is divided into six chapters. In the first chapter, the author outlines the proper professional relationships between the nurse and the doctor, and between the nurse and her patient. Chapter II takes up the special anatomy and physiology of the female generative organs, and also gives a brief outline on embryology. Chapter III describes the changes, both physiological and pathological, which occur in pregnancy; gives the signs of pregnancy, and describes most of the common accidents attendant upon

that condition. The management of pregnancy is fully discussed, especially from the nurse's viewpoint. Chapter IV treats of labor, giving the causes and stages of labor and its management. The usual obstetrical operations are briefly described. Chapter V treats of the care necessary during the puerperium. Chapter VI is entitled "The Infant." It deals with the care of the child from the moment of its birth, especially emphasizing resuscitation of the asphyxiated newly-born and the first care of the eyes. In this connection a statement is made which is believed to be harmful; the author asserts that, "If it is certain that the mother has neither a fresh nor a latent gonorrhea, the wiping of the face after the birth of the head, is sufficient. Ordinarily it is safer to use a silver nitrate solution in the eyes, and this is required by law in many states and should be the practice of the nurse in the absence of the physician, or when he has given no direction." Since it is not possible to determine in every case whether the mother has a latent gonorrhea or not, it is believed that no physician or nurse is justified in not following some such prophylactic treatment of the eyes of the newly-born as that suggested by Credé and approved by practically all obstetricians everywhere.

The book concludes with a short dissertation on infant feeding and the care of premature children. The illustrations are excellent and the printing and binding uniformly good.

War Against Tropical Disease. Being Seven Sanitary Sermons Addressed to all Interested in Tropical Hygiene and Administration. By Andrew Balfour, C. B., C. M. G., M. D., B. S. C. (Public Health), F. R. C. P. (Edin.), D. P. H. (Camb.). Director-in-Chief, Wellcome Bureau of Scientific Research. Quarto, Cloth, 220 pages, 180 illustrations. Price, 12/6 net. Bailliere, Tindall & Cox, Publishers, 8 Henrietta Street, Covent Garden, London.

This book of "Seven Sermons" is indeed intensely interesting. Problems of sanitation in the tropics, both of the old world and the new, are briefly discussed, and these discussions are enlivened by a keen although quiet sense of humor. The book is replete with many excellent illustrations, showing patients suffering from various tropical diseases, the living conditions of the native populations, which enable these tropical diseases to spread so rapidly, and also the methods adopted for combating these pestilences and for securing at least a measure of sanitation. Many of the devices shown for disposing of refuse and excreta of all kinds are indeed highly ingenious, "a triumph of mind over matter." The populations in these tropical countries are for the most part so intensely ignorant that it is a hard matter for the sanitarian to secure any coöperation whatever. Such work requires both courage and genius, but fortunately for the world, there are always those who offer themselves for this work, who have both. Especially interesting is the series of lectures on hygienic problems in Egypt, that cradle of civilization that with the passing centuries has also become the cradle of loathsome diseases and the habitat of appalling ignorance.

Principles of Psychotherapy. By Dr. Pierre Janet, Member of the Institute, Professor of the College of France. Translated by H. M. and E. R. Guthrie. 12 mo., Cloth; 322 pages. The Macmillan Company, New York, 1924.

The first part of this book gives the previous history of the evolution of various form of mental treatment. The author traces the growth of Christian Science from the treatment of Mrs. Eddy by P. P. Quimby, the Magnetist. Of the early origin of Christian Science, the author has the following to say: "The childish protestations of Mrs. Eddy are of little importance. The best one can say in her behalf is that as a delirious hysteric she had in a high degree the power of transforming her own desires into sincere belief. * * * this curious doctrine belongs to P. P. Quimby * * * because Quimby is above all a student of the French magnetist, Ch. Poyen, who had introduced the doctrines of Deleuze to America." Quite a bit of space is also devoted to the discussion of Freud and his doctrines that "all neuropathic disorders result from some traumatic memory considered in the subconscious, and after treatment demands the search for such memories." The author believes that Freud attaches too much importance to the psychology of sex and to so-called "traumatic memories." The "New Thought" movement, the "Miracles of Lourdes," and many other similar religious and moral movements attempting to cure disease by mental healing, are discussed and compared. The second and much larger portion of the book is devoted to an analysis of the processes by which mental disease originates; the methods of psycho-analysis are carefully explained, many cases of phobias and obscessions being cited and analyzed. The last two chapters of the book deal with the application of the facts as ascertained by psycho-analysis in the treatment of mental disorders, which application the author terms "Psychotherapy." More and more attention is being given today to this fascinating although very abstruse subject. It is interesting to note that the author distinguishes between "psychiatry" and "psychotherapy," although with most authors the terms are synonymous.

Social Control of the Feebleminded. A Study of Social Programs and Attitudes in Relation to the Problems of Mental Deficiency. By Stanley P. Davis, Ph. D., Executive Secretary, Committee on Mental Hygiene, New York State Charities Aid Association. 8vo., Paper, 226 pages. Price, $1.25. The National Committee for Mental Hygiene, Inc., 379 Seventh Ave., New York City.

In this volume is found an interesting discussion of one of the fundamental problems of civilization—a problem so far-reaching, and that enters so intimately into the woof and warp of our social fabric that it concerns the welfare of us all. The author discusses at length the general problems of the feebleminded, and takes issue with Lombroso in the latter's concept of the *born criminal*, believing that most criminals are largely so, due to their surroundings. In other words, because an individual is feebleminded, it does not follow that he is criminal in his tendencies; however, he is more susceptible to environment. If that environment be vicious, he is apt to be a criminal; on the other hand, if surrounded by the proper atmosphere such an individual may live a fairly normal life, and not only not be a menace to the community in which he lives, but oftentimes even relieve society of a considerable burden by being trained to be self-supporting. The results of such social reconstruction work as carried on at the Massachusetts School for the Feebleminded, at Waverly, and at the Rome State School for Mental Defectives at Rome, New York, are described, and numerous statistics given, showing what can be done toward salvaging many human lives that would otherwise be wrecked and cast aside as the driftwood of civilization. The work that is being done in these and other centers is indeed commendable. The problems met in the care of these individuals are frankly discussed and the discussions are supported by scientific observations and reliable statistics. The book concludes with a very extensive bibliography.

Texas State Journal of Medicine

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Vol. XX **March 1925** **No. 11**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

Annual Session, Austin, May 5-7.—This is the place and these are the dates for the next annual session. It behooves all and sundry to take notice accordingly. There was some talk of postponing the date of the annual session, in view of the possibility that the Legislature would be in called session at the time, and for a variety of reasons of less consequence, but it was finally decided that there was not much likelihood of interference from the Legislature, and that the several reasons dictating these dates in the first instance were still good. It will be understood, of course, that May 4 is really a part of our meeting, several related—but not connected—organizations meeting on that day, the membership of each of which is coincident with membership in the State Medical Association.

Reduced rates have been granted by the railroads, on the usual terms, which are considered very satisfactory, indeed. The rate will be one and one-half fare for the round trip, on the identification certificate plan, and tickets will be on sale May 2-5, both dates inclusive. County society secretaries will be furnished with certificates, for distribution to such of their members as are certain to attend the meeting. These certificates when presented to any ticket agent in Texas, properly accomplished, will secure round-trip tickets for each dependent of the purchaser at one and one-half fare. The return limit is May 9.

The hotel situation in Austin appears more promising than at first thought for. There are several good hotels there, two of them rather large and commodious, and any number of first-class boarding houses and rooming houses. Inauguration crowds in Austin during January tested the capacity of the city for caring for overflow of visitors in an emergency. Of course, we will expect more comfort and better service than quite probably was extended many who attended the inauguration, but there will not be so many of us, and doubtless comfort may be had by making early reservations. The hotel committee promises to do the best it can, and no one should remain away because of lack of reservations.

The plans tentatively adopted provide for registration and commercial exhibits at the Driskill Hotel. The meeting places will center around the Driskill Hotel and the Stephen F. Austin Hotel, none of them more than a block removed. They will be comfortable and commodious. The Travis County Medical Society and the Woman's Auxiliary of the Travis County Medical Society, are actively engaged in preparing for our entertainment. Indeed, Dr. Bledsoe is experiencing some difficulty in holding down the entertainment features so that the scientific and legislative work of the association may not be handicapped. There seems to be something in the climate about Austin which conduces to play, at least, in so far as visitors are concerned.

The scientific program is nearly complete. We are informed that several of the section programs are full to overflowing. If there are those who desire to get on the scientific program at this late date, they might write to the chairman of the proper section, or to this office, and see what can be done about it.

It may or it may not be too late. It will be remembered that the number of papers allowed each section is now limited. The surgical and medical sections will have 25 papers; the eye, ear, nose and throat section and the section on state medicine and public hygiene, 20 papers each; the section on gynecology and obstetrics, and the new section on radiology and physiotherapy, 18 papers each. Several special features of a scientific nature are in contemplation, most notably, a symposium on cancer, to be delivered before a general session and participated in by each of the scientific sections.

The April number of the JOURNAL will contain the program of the annual session, in full, together with an illustrated write-up of the city of Austin. *Look out for it!*

Woman's Auxiliary Committees. — Last month we published the local committees for the annual session, with editorial comment. It was not understood by the committee on arrangements that the committee on the woman's auxiliary was entitled to be an official local committee, therefore, its personnel was not furnished us. We are pleased to give it here, as follows: Mrs. S. E. Hudson, chairman; Mesdames Joe Gilbert, T. J. Bennett, A. F. Beverly, Z. T. Scott, Geo. M. Decherd and Dalton Richardson.

We also have the list of committees of the Travis County Auxiliary, and perhaps these will be of interest to some of our readers (if our members will take this number of the JOURNAL home with them):

Committee on Arrangements: Mrs. Dalton Richardson, chairman; Mesdames Geo. M. Decherd, Joe Gilbert, A. F. Beverly and Z. T. Scott.

Committee on Registration: Mrs. T. J. Bennett, chairman; Mrs. Ernest Krueger, vice-chairman; Mesdames M. P. Smartt, F. B. Lacey, R. L. Ramsdell, W. D. Lightfoot, M. H. Boerner, Alberto Garcia and F. A. Maxwell.

Committee on Information: Mrs. Morris H. Boerner, chairman; Mesdames Hugh S. McKeown, J. J. Brady, T. R. Pettway and T. O. Maxwell.

Committee on Badges: Mrs. Lee E. Edens, chairman; Mesdames P. E. Suehs, Sam Haigler, E. H. Schwab and C. H. Brownlee.

Committee on Entertainment: Mrs. H. L. Hilgartner, chairman; Mrs. Robt. W. Shipp, vice-chairman; Mesdames J. C. Thomas, Buford Weller; Joe S. Wooten, Neal Watt, Ralph Steiner, J. R. Nichols and H. W. Harper.

Committee on Courtesy: Mrs. W. A. Harper, chairman; Mesdames J. E. Howze, C. W. Goddard, Frank Litten and John Preston.

Committee on Luncheons: Mrs. G. H. Gilbert, chairman; Mrs. Will E. Watt, vice-chairman; Mesdames H. B. Granberry, J. C. A. Eckhardt, Chas. S. Gates, F. C. Gregg, J. W. Bradfield, Goodall Wooten and T C. Hairston.

Committee on Automobiles: Mrs. W. E. McCaleb, chairman; Mrs. J. W. McLaughlin, vice-chairman; Mesdames Josephine Daniels, S. A. Woolsey, W. B. Black, R. M. Wickline, J. F. Gullett and L. H. Kirk.

Committee on Finance: Mrs. Ralph Cloud, chairman; Mrs. J. M. Loving, vice-chairman; Mesdames F. B. Shuford and C. C. Black.

Committee on Decorations: Mrs. Sam Key, chairman; Mesdames Ben F. Jones, G. M. Graham, R. V. Murray and Miss Tommie Wooten.

Committee on Pages: Mrs. Summerfield Taylor, chairman; Mesdames M. F. Kreisle, C. A. Mathews, Z. T. Martin and H. A. Scott.

Will There be a Loss in Membership?—In view of the 300 per cent raise in dues made last year, the collection of dues is a matter of considerable interest to many of us. It has been variously estimated that there would be a loss in membership all the way from nothing to fifty per cent. There are those who seem to desire that the loss be as heavy as possible, in order to support their contention that the raise in dues was a serious mistake. Fortunately, there are not many of these. Most of the opponents of the raise desire that the matter of continuance of dues at the present level be settled for once and a long time, at the Austin annual session.

To date (March 1), there has been a loss of nearly 25 per cent in membership, compared with the same date last year. Last month the comparative loss in membership was approximately 20 per cent. It would seem that the deficit is growing. However, we are convinced that these figures are not indicative of final results. We note that an unusually large number of the larger societies have not remitted to the state secretary at all, societies that will most certainly maintain their membership on a better than 75 per cent basis, and that many of the smaller societies have already paid up for practically as many members as they had last year. At least one society (Sabine County) has paid for more members than it had last year. There may

be others, but we recall this one at the present writing. The secretary of this society insists that he will turn in a 100 per cent membership.

Looking at the matter from a financial standpoint, we are considerably ahead of the game. Up to this time last year 896 members had paid $5.00 each, amounting to $4,480. On the same date this year, 693 members had paid $10,395. In other words, we have lost 203 members (provided the percentage of loss remains constant) and have gained $5,915. Of course, there is no way to compare the value of the lost membership with the value of the increased income. On the one hand, we need to hold these members, for the good we may do them and for the good they may do us, and on the other hand, we need money with which to protect a seriously threatened and most noble profession, and a suffering and ignorant lay public. It is our hope and expectation, that by the time annual reports come in the membership will be fairly comparative with that of the same time last year, and we confidently predict that the membership for the present year will not fall greatly below that of last year.

It will facilitate matters immensely if those of our members who expect to pay will do so without delay. If this is done county societies may remit promptly to the state secretary, and the state secretary will be able to do his part without overworking his office force so much and without so much danger of making those mistakes which are so prone to occur at best, and which are sometimes so embarrassing.

It will be remembered that after the report of the county secretary has been mailed to the state secretary, all former members not included therein will be accounted as nonmembers, and that the privilege of defense in medical malpractice suits from January 1 will be forfeited. It will be understood, also, that no member may pay his dues to the state secretary direct, at the annual session, or at any other time or place, except upon written authority of the county society secretary.

The Next Annual Session of the A. M. A., will be held in Atlantic City, N. J., May 25-29, both dates inclusive. This meeting should not be overlooked by our members who are contemplating a vacation, or a trip of some sort this spring or summer. It certainly will not be overlooked by those who have ever attended any of them. The date is sufficiently removed from that of our own annual session to enable us to attend both. The usual one and one-half fare rates have been granted, but on the certificate plan. In other words, tickets to Atlantic City will be charged for at the full rate, and certificates of the fact of purchase, and for what purpose, secured from the ticket agent at the time of purchase. These certificates must be approved at Atlantic City by the secretary of the A. M. A., who will certify that the purchaser is a fellow of the A. M. A. (which he can become by paying dues at the time of registration, if he is a member of his state association, in good standing for the current year). The approved certificate will enable the holder to purchase a return trip ticket, over the same roads, at half fare.

Should we undertake to dilate upon the pleasure and profit to accrue from attending the meetings of the A. M. A., the old-timers would accuse us of wasting good white paper. Still, there are those who have never attended one of these meetings, and to those we can only say, "Try it once!" It will cost something this year, but a combination of interests may easily reduce the overhead to the point where it will not seem so great. In other words, if we can attend the meeting of the A. M. A., and then visit friends or hospitals, or from far away observe the battle between the rum fleet and the United States Navy, the per diem cost will not seem so great.

The Chiropractic Bill. — The Chiropractic Bill (S. B. 185), the way for the introduction of which had been so well prepared through the press, was introduced in the Senate as we have already stated, by Senator Archie Parr, January 29. It was promptly referred to the committee on public health, consisting of Senators Berkley, Bailey, Fairchilds, Floyd, Parnell, Parr, Stuart, Ward and Wirtz, and the fight was on. Our legislative committee was under direct orders to resist any measure of this sort coming before the Legislature.

This bill seems to be an improvement over its predecessors. Evidently a lesson had been learned. On the face of it, the legislation sought was a raw effort at creating a profession by law rather than by scholarship, and to secure through legislative enactment a privilege which could easily be secured through legitimate study of scientific medicine. A bill merely providing for these privileges would stand little chance, indeed, of getting by the present Legislature (or any other Texas Legislature that we now can recall). Evidently, the authors of this bill considered it wise to make it appear quite exacting of the chiropractors. Indeed, it savors somewhat of the Medical Practice Act, with which the chiropractors, and their general attorney and legislative representative, ex-senator Quintus Watson, have had a good deal to do. It will be remembered that they strove mightily in the Thirty-eighth Legislature to defeat our efforts to perfect the Medical Practice Act, or rather, to have the chiropractors exempted from its provisions. Also, it was noted that the proponents of this bill who visited Austin in its interests, were much more intelligent in appearance, and would appeal to a stranger as being men of affairs in their respective communities. On the whole, the predicate for the demand for this legislation had been well laid.

It may be worth while to briefly state the outstanding features of the bill. It sought to create a board consisting of "five practicing chiropractors of integrity and ability to practice chiropractic as the practice of chiropractic is defined in this act, each of whom shall have a diploma from a reputable chiropractic school or college," etc.—which does not mean anything. Indicating somewhat the contention that had existed among chiropractors as to the standard that should be set up was the provision that "no more than two members of said board shall be graduates of the same school or college of chiropractic." A high school education was required and a resident course of instruction in a chiropractic school of not less than three terms of six months each, and not less than three thousand class hours of actual attendance therein, was required. Those engaged in the practice of chiropractic at the time the law became effective, were within sixty days to declare their intention of continuing to practice chiropractic in the state (omitting mention of the fact, naturally, that this practice has been mainly in violation of existing laws), and of their intention to take the examination provided by the law. This declaration would secure the right to continue to practice until examination could be had, it is presumed.

Examination would be on the following subjects: "Anatomy," "Physiology," Symptomatology," "Hygiene," Chiropractic Principles," "Technic," "Vertebral Palpation," "Neurology," "Chiropractic Analysis," Chiropractic Diagnosis, and Chiropractic Adjusting as Taught by Chiropractic Schools and Colleges, and "Public Health Service." The addition of the last named is a keen piece of political maneuvering. Those who failed to apply for the examination, as required, were supposed to waive their rights. An average grade of not less than 75 was required, but there appeared to be no statement as to what basis the calculations would be made upon. There was an annual registration fee of $5.00. The board might refuse to license any one who presented a certificate or diploma illegally or fradulently obtained, or for fraud or deception practiced at the time of examination; for conviction of a crime of the grade of felony, or one involving moral turpitude, or for "other grossly unprofessional or dishonorable conduct, and for habits of intemperance or drug addiction." The grossly unprofessional conduct is good. This Act would not apply to physicians or surgeons licensed to practice medicine under the laws of the State of Texas, provided they do not "publicly or privately represent themselves to be a chiropractor, nor offer to adjust or rearrange the spinal column of the human being or its articulations, as a chiropractor." Those licensed under this bill could practice chiropractic as defined by the law. It is presumed they could practice no other kind of chiropractic.

The definition of chiropractic was the simplest we have seen, "The science of chiropractice is here defined to be the science of palpating and adjusting the several vertebrae and articulations of the human spinal column by hand." The practice of chiropractic was specifically declared not to be the practice of medicine, surgery or osteopathy. Any person would be practicing chiropractic within the meaning of the Act "(a) Who shall either publicly or privately represent himself to be a chiropractor and shall adjust or rearrange, attempt to adjust or rearrange, or offer to adjust or rearrange, by use of his hands, any of the several vertebrae of the spinal column, or any of the articulations of the spinal column of a human being, (b) who shall adjust or rearrange, attempt to adjust or rearrange, or offer to adjust or rearrange by the use of his hands, any of the several vertebrae of the spinal column of a human being, and shall charge therefor, either directly or indirectly, money or other com-

pensation." The penalty for violating the law was not less than $50 or more than $500, and imprisonment in the county jail for a term of not exceeding six months. There were the usual provisions for fees—which important subject was, no doubt, satisfactorily handled—and the usual safeguards for such acts.

This bill has not to date (March 1) been introduced in the House, notwithstanding newspaper reports were to the effect that Representative McNatt, of Tarrant County, was preparing a chiropractic bill. It is understood that it has been decided to depend on the Senate bill.

Chiropractic Bill Before the Senate Committee.—The health committee of the Senate conducted an open hearing on this measure, February 3. The opponents of the bill were represented by Drs. Bledsoe, Thorning, Beverly and Taylor, of the legislative committee of the State Medical Association, and Dr. T. J. Crowe, secretary of the State Board of Medical Examiners. We do not have a list of the proponents of the bill who were present, but, as we have stated elsewhere, they were a better looking set of people, and avoided the disgusting procedures heretofore practiced in such hearings.

Ex-Senator Quintus Watson, general attorney for the state chiropractic organization, and their legislative representative, who served in this capacity during the last Legislature, spoke for the bill, calling attention to the high standards set out therein, which were as good as those of "any other profession," and briefly urged the necessity of legislation of this sort.

"Dr." F. R. Margett of Denver, president of the National Chiropractic Association (by whatever name it goes), spoke very impressively in behalf of the bill. He was a very professional appearing gentleman, and spoke fluently and well. He stated that his group were not present to attack the medical profession, the chiropractors recognizing that there were some very honorable men practicing regular medicine, some of the basic books taught in chiropractic colleges, as a matter of fact, having been written by such as they. There was simply an honest difference of opinion. Medicine does not constitute any exception to the rule that men will differ. Indeed, medical testimony is notorious for the emphatic differences between physicians of high standing, as witness the recently concluded Loeb case, in Chicago. The doctors are not in agreement on what constitutes proper procedures in the treatment of sick people. In other words, medicine is not an exact science. Men of giant intellect are found on both sides of many controversial questions in medicine.

Doctors are the severest critics of chiropractors, and yet doctors have been for years demanding higher standards for their own profession. Why do they deny the same high standards for chiropractors? The recent "diploma mill scandals" were recited by the speaker, who urged that the medical profession should purge its own ranks before it criticized a profession which had not had an opportunity, and did not have the means, for performing that function for itself. He contended that it was not fair to permit the medical profession to do this house-cleaning, in view of the natural prejudice that had been engendered during past years, and the fact that they were competitors in business. He did not believe that the medical doctors could administer the Medical Practice Act fairly, when it applied to chiropractors. No court would permit the submission of a controversial question to a prejudiced jury.

In substantiation of his claim that the chiropractors are worthy competitors of the practitioners of medicine, he stated that one of the chiropractors present at the hearing had the day before treated forty-nine patients in his office, all of whom would have gone to medical doctors had there been no chiropractor available.

He recited the usual string of criticisms of the medical profession of other days, beginning with the death of Socrates, which came from public prejudice, on down to the days of Harvey, and through the long list of discoverers of scientific principles which were at first held as heresy. He did not take the time, of course, to discuss the mental attitude of the whole people at the time, which could but be reflected by the practitioners of medicine, as a part of the whole. He urged that religious denominations could not well judge each other, nor railroads judge the busses. He discussed chiropractic in general, urging that there must be good in it because high-class (?) physicians have taken it up, several of whom he named.

While there was no attempt to conduct the usual testimony meeting, the speaker testified that he had been in his youth a sickly individual, but had not had any medicine for several years—not since he took up chiropractic. He alleged that John D. Rockefeller is a patron of chiropractic, and that Dempsey, of pugilistic (and nuxated iron) fame, was a supporter of this new method of treatment. A movie actress or two had been cured of tuberculosis by it, and so on and so on. He, of course, recited the statistics secured by the Chicago Medical Society, relative to public predilection for the different

methods of treatment, and misquoted the Mayos and Cabot, and perhaps other medical men of great repute, who had tried to speak the truth and shame the devil—succeeding mainly in speaking the truth. He urged that medical men had failed to find specific remedies for many diseases, notwithstanding tremendous effort, and that people continued to die and get well at about the same ratio, regardless of treatment. The mechanical therapist, at least, does not interfere (?) with illness. The narcotic situation did not escape his attention, the allegation being, of course, that physicians were responsible for the large number of dope fiends throughout the country. And again, of course, the medical profession came in for criticism because of the number of prescriptions for whiskey that had been written in this State during the past year, full statistics covering which he, and we, had just heard recited to a committee, by the "petticoat lobby." The present dearth of physicians in rural districts was cited, in order to prove that the medical profession has none of the missionary spirit and is trying to serve itself and not its people. He overlooked the fact entirely that his own group avoids the same locations that the medical profession avoids, and for the same reason, lack of financial support.

He thought it unfair that the medical profession should demand that chiropractors study drugs and surgery and the like, when it does no practice requiring such knowledge, overlooking the very evident fact that chiropractors treat surgical cases, whether or not they know it, and assuming that there is more difference between the drug and drugless methods of healing than there is between the several drugless methods. He did not urge that a thorough knowledge of fundamental medicine, as required by the State Board of Medical Examiners, would hurt the practitioner of chiropractic. Indeed, he seemed to be proud of those renegade physicians whom he cited as members of his cult. The fact that we are entitled to life, liberty, and the pursuit of happiness, was used in support of the demand that the public be allowed to have chiropractic treatment, the which it is so insistently demanding. Chiropractic as a healing art has a right to exist, and it will never be adopted by the medical profession, hence will die if not legalized. (That would, indeed, be a calamity!) The medical profession, with its steel braces, is helpless in its efforts at curing infantile paralysis. The chiropractor cures that disease easily.

Several court decisions in other states were cited to prove his contention that chiropractic is not practicing medicine and that the law establishing a standard for the cult would be constitutional in Texas. He did not refer to any of the court decisions in or from the State of Texas. To demand of the chiropractor examinations demanded of physicians would kill that profession; certainly, it would keep chiropractors out of the State. He overlooked the very patent fact that there were at the time chiropractors practicing medicine in Texas. He also overlooked the fact that osteopaths have come up to the lick-log and seem to be prospering and progressing along with the rest of the medical profession, despite the fact that they practice mechanical therapy exclusively (although they have a perfect right to practice medicine after any system they choose). He said that the chiropractors desire to eliminate the mushroom chiropractic schools and build up the profession of chiropractic on a high plane, just as the medical profession has been doing for the past several years.

Several of the senators present interrogated the speaker at the conclusion of his remarks, confusing him somewhat. Among these were noted Governor Miller and Senators Parnell, Holbrook and Berkley.

President Dr. Bledsoe briefly discussed the attitude of the medical profession towards the chiropractors and their claim for legislation, holding that there was nothing personal in our opposition, and that our principal purpose was to protect the public by providing a single high standard of educational and professional requirements for those who would assume the serious responsibilities of practicing medicine, which the chiropractors unquestionably do, both according to common reason and decisions of the courts. He stated that it was embarassing to the medical profession to have to come before the Legislature repeatedly in opposition to efforts on the part of people who claim that they are trying to improve themselves. The medical profession many years ago decided that there was only one way to handle the practice of medicine, and that was to require examination only on the proven facts of medicine, which is what the present law does.

There are many physicians practicing medicine in Texas today, who disagree violently with even the established facts of medicine, but who have informed themselves concerning those facts. That is inevitable in any line of reasoning. As a matter of fact, when a man is informed, he does what his information tells him is best to do, and therein lies the protection of the public. If the chiropractor is honest in his contention that he desires to raise his standards and shut out the quacks and fakers, let him continue his studies and perfect himself on at least

the fundamentals of medicine, thereby fitting himself to come before the Board of Medical Examiners, exactly as the osteopaths did at a time when the osteopaths were looked upon in this State as quacks. Far from throttling this cult, the Medical Practice Act of Texas has given them a standing that they do not have in most of the states. Indeed, it gives them the same rights and privileges exercised by the so-called medical doctors. The minor schools of medicine comprise a majority of the State Board of Medical Examiners, according to the Texas law, and it is reasonable to assume that this group would not permit any minor school to be unfairly and unjustly treated. Systems of treatment and doctors themselves pass on, but scientific truth remains. The great work done by Erlich, who has just passed away, will be remembered through all the years to come, and nobody will wonder whether he was a regular or a member of some minor school.

The chiropractors are not sufficiently instructed to understand the spread of communicable diseases. Indeed, they deny the "germ theory" of disease, a thing which has been definitely and repeatedly proven, even to the satisfaction of the layman. It is best to stick to the things we know until unproven suggestions have been proven, even though there should be a doubt as to the value of the known truths. There is no examination on methods of practice, which include practically all of the theory of medicine. *There might as well be Presbyterian geography as chiropractic anatomy.*

To a question from Senator Parr, as to why the chiropractors continue to practice medicine in Texas contrary to law, and why the medical profession does not stop them, Dr. Bledsoe stated that the medical profession is not in the enforcement business. There are bootleggers, crap-shooters and high-jackers, also. Why don't the lawyers or the churches, stop these?

Honorable C. C. McDonald of Wichita Falls, representing the State Medical Association of Texas, followed Dr. Bledsoe in speaking against the measure. He was of the opinion that the Texas Senate would never lower the standards of the ancient and honorable profession of medicine, which had been attained through so many years of toil and sacrifice, and provide for the grinding out of doctors like sausage in a butcher shop. The speaker for the chiropractors had not presented any valid reason why the bill should be passed, and an exception made to the present very excellent Medical Practice Act. The effort to break into a learned profession without learning, is not new. The profession of medicine has been compelled to attain its present high standards in spite of doggerel, quacks and impostors, both in and out of the profession. The present seven-year course of study is in marked contrast to the eighteen months set out as the high standard for the chiropractors.

The contention that applicants for license to practice medicine should be examined only in that part of medicine which they propose to practice, is ridiculous. The chiropractors, according to every court decision from the State of Texas, are practicing medicine as far as they go. To permit them to be examined in accordance with their peculiar theories only, would be equivalent to permitting a lawyer to take an examination upon divorce laws, or upon some peculiar idea of what the law should be. The contention that chiropractors should not be examined by doctors, considering that chiropractors are practicing a part of medicine, is equally ridiculous. Lawyers examine lawyers, no matter what the idea of the examinees may be in regard to the law, and school teachers examine school teachers, and so on. For six thousand years the term doctor has stood for knowledge, for the highest degree of learning attainable, and now it is proposed to extend this title to individuals who are possessed of a high school education only, and are alleged to have spent eighteen months studying a theory, a theory which cannot be substantiated in any important particular.

What would happen if the medical profession were wiped out and the health of the people left to the chiropractors? Does any sensible man believe that their theory of disease would protect against diphtheria, smallpox, typhoid fever, and other communicable diseases? Does anybody believe that manipulating the spinal column can cure appendicitis? Indeed, it is quite clear—and the thing has been done—that such manipulation would likely rupture an appendix already stretched to the point of bursting by its content of pus, usually a fatal accident. The testimonials adduced in favor of this system of treatment could be easily offset many, many times over, by equally wonderful results from scientific treatment, and by disastrous results in cases treated by the chiropractors. Indeed, scientific medicine is not free from accusations of this sort, but the doctor has the satisfaction of knowing that he has done the best that scientific medicine can teach, and that experience and reason are in support of his methods. The history of the medical profession demonstrates beyond a doubt that the good in all special treatments will be adopted, and that every promising treatment will be tried out. If

there is anything good in chiropractic, the profession of medicine will use it; and when standard methods of treatment and standard practices have been proven of no avail, they will be discarded. It is an insult to intelligence to discuss the subject further.

Honorable B. Y. Cummings of Wichita Falls, representing the State Medical Association, also spoke against the measure. He pointed out that the bill discriminated against those doctors who have taken examinations under the present law, and those who may hereafter take the examination. The State cannot afford to provide a low standard for one group of practitioners and a high one for another; to be more exacting of one group than of another. Indeed, the Constitution of the State of Texas forbids it. This is not a contest between doctors. It is an attempt to protect the lay public, who must depend upon the medical profession for prevention and cure of disease. The only fair procedure is to determine what are the facts of medicine and what are the theories, and examine on the facts and let the theories alone. That is exactly what the present law does.

The public may depend upon the individual physician to do the best he knows, in his own protection. A law requiring that certain treatments be given or avoided, could not be enforced. The important thing in the practice of medicine is the diagnosis. Whether we believe in this, that, or the other treatment, we must know what has gone wrong. The chiropractor says there is something wrong with the spinal column; the doctor says there is something wrong somewhere, and proceeds to find out where and what it is. The doctor proceeds to remove the cause, and the chiropractor to manipulate the spine. Has the chiropractor demonstrated his ability to determine what is wrong with the machine, provided his theory should, perchance, be wrong? The doctor has done this. If the chiropractor will take the same schooling the doctor has taken, and stand the same examinations, he can do his work better, no matter what is right and what is wrong. He will then be free to do what is right, and best. Indeed, he desires to do that now, but does not want to go to the necessary trouble and stand the necessary expense.

The present Medical Practice Act represents the best judgment of the Texas Legislature, after three notable contests, perhaps the warmest that have ever taken place in the Legislature, and it is not likely that its standards will be departed from to the extent that the present bill requires. We might adjust backbones a thousand years and not find out that the mosquito causes malaria and yellow fever, or that the louse spreads typhus fever, and the flea bubonic plague. The backbone may be adjusted to any possible degree without rendering the patient immune from smallpox. The doctors would, indeed, prosper if the promotion of disease were in accordance with chiropractic theory.

The Honorable Quintus Watson spoke again for the proponents of the bill. He displayed a long and imposing brief, and very graciously announced that he would not take the time of the committee in its reading. He said that the attitude of the medical profession was somewhat like the children in the Baptist family who baptized the chickens and the ducks, and then attempted to baptize the cat. The cat scratched and squirmed so much that it was difficult to immerse him (or her). One of the children said, "Oh, well, just sprinkle it and let it go to hell." They consider that all except licensed doctors are quacks. The present bill asks no more than has been asked and secured by the medical doctors, in raising their own standards. The first medical practice laws were not so severe as the present bill; they exempted those who had come up to the existing standard, whereas this bill requires examination of all. The proponents of the measure are not representing barbers, bootblacks and the like (since when?), and do not want to let the fence down for the entrance of ignorant persons into the practice of medicine. This bill would protect the public in that particular. The opponents of the bill would deny the public the right to relief through this method of treatment, because they themselves do not believe in it.

As long as the people are being cured by chiropractors, juries will not convict chiropractors of violation of the law (he evidently had not been reading the papers). He agreed with the opponents of the measure that there ought to be lots of chiropractors in jail. It is that class that the present bill would protect against. He has as much respect for the president of the Chiropractors' Association as he has for the president of the Medical Association.

After reciting the principal points in the bill intended to protect against ignorance, the speaker stated that if the present Legislature will not give the chiropractors a law for their protection, the next Legislature, or the next, will.

Dr. T. J. Crowe of Dallas, secretary of the State Board of Medical Examiners, spoke in opposition to the bill, explaining briefly the principal provisions of the present Medical Practice Act and clearly, and logically, demonstrated the fairness of the measure, and the disaster that would surely follow from a

system of multiple boards and multiple standards.

Some little misapprehension was created by the announcement that the Senate committee reported the bill out favorably, with an unfavorable minority report. The truth of the business is, there was just one member of the committee who was in favor of the bill, with another member apparently undecided. The rest of those present were against it. It is not for us to elucidate the wiles of politics, but the matter has been explained to us somewhat as follows: Senator Berkeley, chairman of the committee, was not supposed to vote except in the case of a tie vote. Senator Parnell voted against the bill. Senator Parr, the author of the bill, voted for it. Senator Floyd did not vote. Senator Wirtz voted for the bill, with the understanding that he was at liberty to vote against it and even fight it, when it came up for consideration in the Senate—which he, as a matter of fact, subsequently did. That gave the bill a majority vote—two for and one against, with two not voting. Senator Berkeley later joined Senator Parnell in the minority vote against the bill. The balance of the committee were absent when the vote was taken. There were several important, conflicting hearings, unfortunately for us, which it is presumed accounted for the absenteeism.

The Chiropractic Bill in the Senate—Having been reported favorably (two for and two against, with one not voting) many proponents of the chiropractic bill professed to believe that it would pass. There was never a chance for anything of the sort, and, in our opinion, the principal advocates of this bill knew it. There was apparently no great effort to bring the bill to a second reading. When it was laid before the Senate, Senator Parr, its author, moved that it be laid on the table, subject to call. The object of this maneuver was clear, of course. Being subject to call, the friends of the measure could pick the time when the ranks of its opponents were for any reason reduced. Senator Holbrook, therefore, moved as a substitute, that the consideration of the bill be indefinitely postponed, which substitute motion was carried by a viva voce vote.

Ordinarily, this would be the end of the legislation, but the rules of the Senate permit a reconsideration at any time. The great majority of the Senate was so clearly against the bill that it was thought that no further efforts would be made in its behalf. However, near the noon hour, on February 16, Senator Parr moved to reconsider the vote by which the Senate indefinitely postponed consideration of the bill. Senator Wood immediately moved to table the motion to reconsider, and his motion to table was adopted by the following vote:

To table (to kill the bill), Senators Berkley, Bledsoe, Holbrook, Moore of Cooke, Moore of Hunt, Pollard, Price, Reid, Smith, Stuart, Triplett, Ward, Wirtz and Wood.

Against the motion to table (to permit of a vote on Senator Holbrook's original motion to indefinitely postpone), Senators Bailey, Bowers, Davis, Fairchild, Floyd, Murphy, Parr, Real, Strong and Woodward.

Absent, Senators Hardin of Erath, Hardin of Kaufman, Lewis, Miller, Parnell, Russek and Witt.

To make a long story short, the bill was thus killed, by a vote of 14 to 10, with 7 absent. Among those who voted for a reconsideration are some who were emphatically against the bill, and others who, while they had heretofore favored such legislation, had given assurance that they were now opposed to it. This, therefore, can hardly be considered a hard and fast test vote.

Other Medical Legislation.—There are pending numerous bills pertaining to the public health, consideration of which will be postponed until a later number of the JOURNAL. Quite likely, our readers are keeping track of the more important of these bills, through press reports, and our discussions are not intended as news.

The bill carrying needed amendments to our laws pertaining to the care and treatment of the insane, referred to in our last number, after quite a turbulent time in spite of an overwhelming belief in the advisability of some legislation of this sort, has finally passed both branches of the Legislature, and is now in the hands of a free conference committee. It is believed that this committee will eventually approve of the principal items remaining in the measure, provided the appropriation necessary to put it into effect is greatly curtailed or left entirely to another Legislature. It is not known how the Governor looks upon this legislation, or how she will react to the bill as finally passed. It is assumed that she will be in sympathy with its purposes. A full discussion of this measure, and its passage through the Legislature, will be forthcoming later on.

The several measures seeking to throw further restrictions around the prescribing of alcohol, of which we also spoke last month, are at this writing in a doubtful state. There have been so many amendments to the main bill, that it is hard to tell just what it provides. All but one of these measures have been defeated, and that one is waiting action in the House, having been passed by the Senate. It is hardly likely that it will become a law. It seems to be the general opinion that it will not greatly inhibit the doctor

who would prostitute his profession by bootlegging whiskey through the expedient of prescription writing, and the individual who would in this manner secure whiskey for beverage purposes; and that it would greatly handicap the physician who is honest and the patient who is innocent. According to press dispatches, the "petticoat lobby" is strongly pushing this measure, and the surprising thing is that it has not already become a law, as we know of no one in particular who is fighting it. We do know that some very unkind things have been said about the medical profession. Perhaps a more extended discussion of this measure will be forthcoming in these columns at a later time.

The Sheppard-Towner law has emerged triumphant, it seems, through the strong support of the aforesaid "petticoat lobby." The medical profession has had little to do with this legislation, beyond that of agreeing that while the principle is wrong the work is worthy, and about the only way open for securing funds for its continuance is by accepting the handout of the Federal Government.

The Optometry law has been amended so as to expedite and make more certain its enforcement. Beyond seeing that its rights were respected, the medical profession has taken no part in this legislation. We have not hesitated to say that if the law is to remain in force, it should be made enforcible. We have been cöoperating with the optometrists in the enforcement of this law, to the extent that opportunity has offered, and consequently would not oppose any measure designed to help.

The usual run of bills pertaining to pure water, ice cream, self-rising flour, infected mattresses, marriages, cosmetics, chiropody and the like, are before the Legislature, most of which will die on the calendar. These will be discussed in the annual report of the Council on Legislation and Public Instruction.

Clean-Up Week.—The State Board of Health will conduct the annual Clean-Up Week this year, beginning Sunday, April 5, which is designated as "Sermon and Lecture Day." It is intended that local authorities, or health and welfare organizations, undertake to see that on this day sermons and lectures be delivered on a variety of health subjects, particularly the method of spread, and the means of preventing the spread of communicable diseases, including the prevention of smallpox, typhoid fever and diphtheria. On Monday the people will be asked to determine whether they and their families are all in good physical condition, and to look into their local hospital and laboratory facilities, the community health department, the health department of the schools, the water supply, dairies, tourist camps, swimming pools, and the like.

On Tuesday, it is expected that the sanitary condition of the home and the community be carefully estimated, and steps taken to correct faulty conditions.

Wednesday is denominated insect and rodent control day, and the activities on this day may be easily surmised.

On Thursday, attention will be given to child welfare, particularly whether or not all children have been registered at birth.

On Friday, the prevention of disease will be stressed, by newspaper publicity, and by health talks on the prevention of diseases, communicable and otherwise.

On Saturday, the last day of the Clean-Up Week, all phases of the food supply ought to be looked into, particularly the matter of

During this same week, the Texas Public exposure of foods on sale, to flies, dust and dirt, and the sale of impure foods.
Health Association will be conducting the Seventh Annual Negro Health Week in Texas, along similar lines as those above outlined.

The negro comprises one-sixth of the total population of the State of Texas. Any movement for better health that did not include the negro, would fail, for disease is transmitted from one race to another just as easily as from one person to another. The white man comes in constant contact with the negro, as he is often employed as servant, cook, laundress, etc.

Any improvement in the health of the negro will also show among those with whom he comes in contact. It is hoped that every one will encourage the colored man to observe this week and that the effects will last throughout the year.

There can be no true estimate of the value of thus drawing attention to special subjects on special days, and the State Board of Health and the Texas Public Health Association are to be thanked for pushing these matters. Medical societies should enthusiastically join with other civic organizations in making a success of the movements here referred to.

Meet Me at Austin
May 5-6-7

ORIGINAL ARTICLES

AN EXPERIMENT IN POSTGRADUATE WORK AT HOME.*

BY
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At the present time we have at our command the following opportunities for postgraduate study: County and state medical societies, hospitals with organized staffs, books and journals, and various colleges giving postgraduate courses. Relatively few physicians are located near teaching centers, thus having the opportunity of taking a special course without much disadvantage, and most physicians have to leave their practice and travel a considerable distance, before having such an opportunity.

At first glance, it might seem that the opportunities mentioned would be sufficient to satisfy any one's desire, but there are several doctors who have had a sort of hunger-lust for knowledge and have been anxious to find some way in which they could satisfy this craving with no means at hand to do it. One of the best ways to study medicine is *to study it*—that is, to follow one's own clinical cases. The methods of study pursued by Louis, Lannec, the Hunters, and many others who laid the foundations for our present medical science, consisted not only in studying their cases, but in following them to the post-mortem table and drawing their conclusions from facts collected both there and at the bedside. In recent years, where post-mortem material has been available, interesting clinics have been held by having the clinicians and pathologists meet together for the purpose of reviewing histories and showing the post-mortem material. One's own cases are just as good for study as those seen in some clinic and one can get more good from them if he will follow them through than by seeing some one else's case, but the problem has always been to get the clinical and post-mortem material together. The only thing we lack in being able to carry out this method of work is the means of getting post-mortem material.

In private practice, and especially outside the few big medical centers, this kind of study has not been generally carried on. As a consequence, physicians have not had the opportunity to keep their knowledge of anatomy and pathology fresh by experience and have come to rely on books and journals for their source of knowledge. Now books and journals are good only in so far as they are based on the real experience of the writer. If one writer abstracts another's article, he must necessarily leave out some of it, or he may misinterpret the meaning of some other part and thus not convey the knowledge that the first writer meant to convey. No matter how much a man knows about a subject, it is impossible for him to so write it that he can convey all of his knowledge to some one else.

Books must of necessity be more or less dogmatic, or present only types of a disease, while the disease itself is subject to untold variations. Clinical diagnosis is a difficult undertaking and where one needs help is in the indefinite and obscure cases; and it is here that books are of the least help. Diagnosis, if it is to be of value, must approach a reasonable degree of accuracy. The many aids, mechanical and otherwise, to diagnosis are too numerous to mention, and their number is increasing daily. So the physician has at his command more refined methods of diagnosis than ever before and consequently the findings require more careful interpretation, and to prove the accuracy of all these methods, they must be checked up.

Most of the means for a study of medicine as suggested above are already available: First, the patients; second, the laboratories; and third, good hospitals which are becoming more numerous. But the profession as a whole, lacks an interest in and ways of getting and doing post-mortems.

Last year I presented before this section a paper on "The Importance of Post-mortem Examinations," in which the statement was made that there ought to be a pathological institute in every community of any size to save the pathological material and make it available for the physicians of the community. In case this could not be done at once, it was suggested that, as a substitute, it was possible for physicians to form groups for the purpose of getting post-mortems on their cases that died and using the material for their advancement. This idea seemed so reasonable that an effort was made to put it into effect.

In starting the work, the hardest part was to know how to begin, as no prescribed methods for it were available. A few of the men who had been anxious to do some sort of study were consulted in the matter and asked if they cared to join a group with the object of keeping good histories on their cases and getting post-mortems of those that die, and use this material for study. All the men consulted were willing to enter the group and undertake such study. The material was soon at hand and after two or three good cases had been collected, a meeting was held and the material reviewed. In a couple of weeks there was material enough for another meeting, and at the second meeting a

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 29, 1924.

few more men were invited, nine or ten being present in all. All present were so enthusiastic about the work that they wanted to go ahead and push it vigorously, but this was just at the beginning of the summer vacations and not much was done until after vacation.

Some material had been collected during the summer and after the first meeting in September, a more definite plan was formulated and it was suggested that a group of twelve members would be as many as could work together in the small operating rooms of the various morgues; the limit, however, has been crowded up to fourteen. For convenience, this group calls itself, "The Pathological Club." At least two meetings have been held at the laboratory each month and the post-mortems for the most part have been done at the undertakers' rooms, of which there are three, and each one has a good operating room. The undertakers have been exceedingly considerate towards us and have given us every assistance possible. The entire group is called whenever there is to an autopsy. An initiation fee of $5 and dues of $4 per month, have taken care of all expenses up to the present time.

At first, all the post-mortems were done by the pathologist, but just as soon as the members got used to the work, various ones were taught the technique, usually two and sometimes four men working at once; and now any one of them is able to conduct a post-mortem. This gives every one an opportunity to see and feel as well as to develop the ability to work and thus keep up a keen interest.

At the meetings which are held in the evening, the histories of the cases are given, the literature on the subject reviewed, specimens are shown and slides of the lesions projected on the screen. The amount of material that can be had is simply astounding, if one starts out to find it. The material so far might be classified almost as a pathological gold mine. It has been greatly varied in character and has covered a very wide field of clinical interest, presenting many unusual cases, some of which deserve much more time than we can devote to them. We are fortunate in having the health officer in the group and he has been very much interested. Through his influence with the coroners, and as city physician, he has been able to furnish a large amount of material, especially of the kind known as sudden deaths and those dying unattended by a physician. It might seem that this kind of material might not be very desirable, but we have found it unusually rich from a pathological point of view, and exceedingly worth while.

From the point of view of vital statistics, it is very important to have all of these cases autopsied, for it is impossible to diagnose the cause of death accurately by any other method, and the statistics would be much more valuable, unless a post-mortem was done, if the cause of death was reported as unknown. As it is, the diagnoses are usually just a pure guess, except where a post-mortem has been done. For instance, the cause of death frequently reported in these cases is acute indigestion, but up to the present time we have not seen such a case, and it is doubted by many whether acute indigestion ever has caused death. At other times, it has been surprising to see what extensive lesions a person could be afflicted with and still continue working almost up to the minute of death. By tracing some of these cases back, it is possible to get a certain amount of history which, though it may be brief, helps to explain the condition.

An interesting case of this kind was found, in which an extensive hemorrhage into what seemed to be a large cavity in the cerebellum had occurred. There was also another cavity in the left cerebral hemisphere, above, somewhat lateral to and parallel with the left ventricle, but not connecting with it. The hemorrhage in the cerebellum extended into the lateral ventricles, but not into the other cavity. This woman had been a housemaid and had worked up to within two hours of her death. She was taken sick suddenly and died before a physician could reach her. On careful investigation at the place where she was working, it was found that she had often been nauseated, much as if she had been having continuous attacks of cholecystitis, or gastric ulcer. She also had had a peculiar disturbance in equilibrium; automobile riding had been very distressing to her, often producing nausea.

Another case coming under this group of sudden deaths, was that of a man who was said to have been a physician, but who had not been in practice, and had been living in a rooming house. He was taken with a sudden pain and died while some one left the room to telephone for a physician. It was found that he had a ruptured heart in the region of an old infarct. A little information was finally obtained concerning him—one of the doctors in town had treated him at various times for attacks of angina pectoris. His first attack was probably the result of a cardiac infarct and the later ones may have been caused by some irritation of this degenerated spot.

Many other cases of great interest coming under this group could be presented, but this will illustrate the kind of material that

can be found in coroner's cases. In strictly private practice, members of the club have secured a large percentage of permissions for post-mortems—one of the doctors claims a record of 100 per cent. Records are kept and all the best specimens are saved. A room has been obtained for a museum, the object of which is to accumulate material for further study, as a basis for papers and for reference work. An excellent foundation for cardiac, renal and pulmonary study has already been accumulated. After a sufficient amount of material to illustrate types of various diseases has been collected and properly mounted, it is hoped that some public demonstrations can be held, which will help to educate the public. A few carefully planned demonstrations with a selection of specimens from time to time, will do much towards upsetting the nebulous theories advocated by various branches of quacks.

The work thus far done, justifies the statement that there ought to be a pathological institute in every community, for we have had to throw away much material which we could not afford to keep, and if all the material in the city was utilized, it would furnish abundant supply for a large pathological institute, where it could be made very useful to all who cared to use it. We have also shown that it is possible to use pathological material for group study.

One of the first things of striking interest that has come to the notice of the men of this group is the large number of pleural and peritoneal adhesions that have given no symptoms during life, and great interest has been taken by every one in watching out for these adhesions. At other times it has been just as surprising to find out how much damage one single adhesion can produce.

For those who are particularly interested in surgery, there has been a great deal of interest in the anatomical relations of the abdominal organs. The anatomy of the gallbladder has been reviewed several times and under various conditions. The organs of the pelvis have also received much attention, as well as the blood supply to the kidneys and intestines, along with the relations of ureters, etc. The internists have been more particularly interested in the anatomy of the chest, and have devoted much time to the study of the heart. The matter of acute dilatation, thickness of the walls, etc., has been given consideration and there have been many lungs in which there has been cavitation and this has received special study by those interested. But possibly the most valuable thing of all has been that the necessity for careful and thorough examinations in order to make a diagnosis, has been shown.

The value of the work has not been confined to the members of the club alone. At the El Paso County Medical Society, it was voted last fall to have a meeting once a week instead of twice a month, but when the subject was up for discussion, the question arose as to whether sufficient material would be available to supply so many meetings. It seemed impossible to get papers enough to take up so much time and then the men also wished to have some other type of meeting. To take care of one of these meetings, a clinical evening was put on for the society once a month, and when there was not sufficient clinical material, an abundance of post-mortem material was always available. It has so happened that the material has largely fallen into groups, or cases of a similar nature, so that more or less of a symposium could be held by the use of post-mortem specimens. For instance, one meeting was devoted entirely to cancer and its early diagnosis; another to pulmonary conditions, particularly embolism, thrombosis and spontaneous pneumothorax. So, at the different meetings, it has been possible to secure sufficient material to cover a certain group of diseases, or a disease affecting one single organ, instead of having a hit or miss program.

Many of the men outside the club, who have had interesting or difficult cases that died, have been very enthusiastic in trying to secure a post-mortem, and in most instances, where they have tried they have succeeded. In this way many members outside the club have been helped and much study has been stimulated and encouraged.

Up to the present time we have done 95 post-mortems, and while this is too small a number to classify and analyze, much good material has been accumulated. As a matter of illustration, I will present a few cases, briefly, just to show how the material is handled and what may be expected.

CASE REPORTS.

Case No. 1.—A small child, about two years old, went to a physician complaining of trouble in the ear. The doctor told the parents what should be done in the case but they did not like his suggestions so did not do anything for a few days and then took the child to another physician. At this time the child was still suffering with subnormal temperature and later commenced to complain of headache and became more or less drowsy, with a tendency to lie on one side. The spinal fluid showed nothing definite. The child died with supposed meningitis. Post-mortem examination revealed a thrombosis of the lateral and posterior sinuses, extending from one foramen to the other. There was some slight mucoid pus-like material in the mastoid, which, when stained, showed a very small Gram-negative bacillus. There was also extensive hemorrhage into the left cerebral hemisphere. This was unquestionably a case of original influenza infection, but if no post-

mortem had been done, it would have been classified as meningitis, probably tubercular.

Case No. 2.—A middle-aged Mexican man came in, complaining of pain in his back, some abdominal distension, and later, some pain in the abdomen. An exploratory operation was done and a large number of small white masses were seen on the liver. The case was diagnosed as a primary carcinoma of the liver. The patient died, and by a strenuous effort permission for a postmortem was obtained. On opening the chest and abdomen, large numbers of rather yellowish nodules were found throughout the lungs and liver and rather large retroperitoneal glands, such an extensive involvement that it was difficult to tell where the original site of the tumor was. The organs were removed in one mass and carefully dissected, by which method it was definitely determined that the growth originated in the prostate, which was somewhat enlarged but had not caused any noticeable symptoms.

Case No. 3.—Another similar case, at almost the same time, also died from a metastasis of the liver. An exploratory operation had been made in this case and it had been diagnosed as primary cancer of the liver. This patient had suffered from bladder symptoms for years and had been in the hands of some very expert physicians, even up to the time of his death. He also had carcinoma of the prostate, but it was so located that it did not cause obstruction and was not suspected.

If no examination had been made of these two cases, both would have been diagnosed as primary carcinoma of the liver, and the real trouble would never have been suspected.

Case reports could be continued almost indefinitely, but these are sufficient to show something of the nature of the material studied.

SUMMARY.

1. Medicine is an ever-expanding science and those who would be proficient in it must study continually.

2. The best way to study medicine is as a science in itself.

3. The present method of study is somewhat deficient; to make it efficient requires post-mortem investigation of the cases that die.

4. There is an abundance of clinical material and all that is needed for a complete system is the means for doing a post-mortem.

5. Abundant post-mortem material is available, if the physicians will organize themselves to use it, and this can be done at very small cost by forming groups for this purpose.

ABSTRACT OF DISCUSSION.

Dr. Wm. Keiller, Galveston: This paper may easily be described as the most important one in the medical section. If it should stimulate the doctors of several cities to carry out this plan, it will have served a great purpose. There should be no difficulty in getting autopsy material. I have found that the undertakers are usually ready to co-operate with you, and you can do your autopsy after the body is embalmed. There is nothing that teaches us so much as our mistakes; there is nothing that teaches us where we have made mistakes more than autopsies. Keep the histories of these cases, and keep your autopsy material afterward in 5 per cent formaldehyde. These specimens always prove to be of value. They can be labeled with lead and copper stamps and put in 5 per cent formaldehyde and they are there for all time. There is no great difficulty in getting autopsies in private cases. Show the people why you want an autopsy and how it may aid you in similar cases in the future, and they will themselves become interested. When I was young, I had no difficulty in getting autopsies in the houses of the poor. There is nothing on the face of the earth that will advance your work like autopsies will. The material is there for you if you will use it.

SOME FACTORS OF SAFETY IN THE SURGICAL TREATMENT OF HYPERTHYROIDISM.*

BY

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DALLAS, TEXAS.

There are two primary questions that present themselves when we are dealing with a patient apparently suffering from thyroidism, first, the assurance of an accurate diagnosis, and second, the protection of the patient from the dangerous factors in the treatment of his disease.

Under the subject of diagnosis, I wish to reiterate only a few of the important phases, because we cannot think too much about the differentiation of this disease from some others which present very much the same syndrome of symptoms and signs. The two conditions with which hyperthyroidism is most often confused, are nervous exhaustion and early tuberculosis. Perhaps the most important part of the diagnosis is gained from the history. The duration of the symptoms, accompanied with a history of crisis, is valuable; hyperthyroidism goes in cycles and, following a crisis, the patient is almost free from symptoms. Loss of weight, in spite of an increased appetite, is worthy of note.

The early tubercular case has a normal appetite; the nervous exhaustion case has a "finicky" appetite, but that of the case of hyperthyroidism is a steady and a ravenous one. Increasing nervousness, especially a feeling of internal unrest, is characteristic of this disease. Those about the patient notice a change in her disposition in that she is less tolerant than before. For example, a mother is greatly annoyed by her children, cries on the slightest provocation, and thinks every one "has it in for her." The patient will often characterize her feelings by some such remark as, "I can't catch up with myself, I am always behind."

The physical examination is the next important thing. An altered condition of the

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myocardium, the presence of tremor, the increased pulse rate, the increased blood-pressure in 90 per cent of cases, and noticeable loss of weight, are noted in most cases of hyperthyroidism. The expression of the eyes is usually characteristic. Exophthalmos is present in less than 75 per cent of cases, but a peculiar wide-awake expression is always present. The condition of the neck tells very little; the presence or absence of struma means nothing, as will be seen from some

FIG. 1.—Adenoma of thyroid, with pressure and erosion of tracheal rings. Patient 81 years of age.
FIG. 2.—Same patient, postoperative.

of the pictures. Some of the worst cases have a depression rather than a bulging over the thyroid. The presence of a thrill and bruit over the superior thyroid artery is very important.

The metabolic rate helps to clear up the diagnosis in some cases, although this cannot be depended upon too much, because it is low or minus after a crisis. There are several conditions that will give an appreciable rise in metabolism. In the Crile Clinic, 500 cases had their metabolic rate checked against clinical judgment and subsquent convalescence. They did not agree as closely as was expected. Two cases in this series bring out the value of clinical judgment as against the metabolic rate. The first patient had a metabolic rate of +90, and she had a primary thyroidectomy with an uneventful recovery; the second had a metabolic rate of +25, and she died from a single ligation.

X-ray examination of the chest, helps to rule out early tuberculosis, and incidentally determines whether or not the thyroid is substernal. As to the surgical management of the patient, the possibilities and not the probabilities should govern. It is to be remembered that these patients are bad risks and if they are handled like ordinary surgical patients, many of them die.

They are hypersensitive to all forms of stimuli, physical, psychic, traumatic and chemical, and so the environment is most important. The treatment begins when the patient enters the front door of the hospital. All arrangements must have been made, so that he can pass quickly and quietly to his room. The room and surroundings should be as homelike as possible. The hypersensitiveness of these patients is very well brought out by one I sent to the hospital recently. She was temporarily put into a two-bed room, with a patient that was vomiting. When I saw her two hours later, she too was vomiting and was completely upset. She had quieted down at home under ideal surroundings and had had no suggestion of gastric disturbance. It took two days to get her over this upset, before she was ready for operation. Nurses, and other associates, should never mention operation but should be cheerful and assure the patient he will come out all right.

The method of stealing the operation, is well worth carrying out in bad risk cases. The operating clothes are put on upon admission, and their presence explained by the frequent examinations that will be necessary. There must be a ready explanation for everything, because the mind of these patients is as alert as that of a cocain addict. The sterile hypo and gas inhalation given every morning are explained to be for the heart. There are many combinations that can be worked out. Those patients that know the routine, are operated upon at the time of the first inhalation, because they are expecting several more.

A very important safety factor is water. The internal respiration is carried on in a water medium, and on account of the increased metabolism, hyperthyroid cases use up their water very quickly. If vomiting or any other condition is present, so that enough water cannot be given by mouth, 4000 c.c. are given daily by hypodermoclysis, using a normal saline solution containing 1/16 per cent of novacain, which is painless and nontoxic. A rectal tap of 400 c.c. every four hours is also given. Water, like morphia, is tolerated by these patients to a degree far above normal, because they oxidize it so fast.

But supplying fluids alone, is not enough to keep up the internal respiration. It is necessary that this fluid be passed through the tissues at a sufficient rate to assure adequate oxygenation. If the myocardium is weakened by a long period of overwork, as it usually is, it is made to function better by giving tincture of digitalis in thirty minim doses every four hours for 20 doses or until nausea appears. For the failing internal res-

piration, transfusion of whole blood is the best agent we have. In doubtful cases and in bad risks, such as emaciated, feverish and exhausted patients from 500 to 800 c.c. of blood before operation will do a lot toward stabilizing them. This is well received after the course of digitalis has been given. These patients do not tolerate citrate solution well, because they are hypersensitive to all chemicals.

The question of anesthesia is one of the essential factors in handling these cases. Due to the increased metabolism, the internal respiration of the cells has been overworked and if a deep anesthesia is produced, suboxidation obtains. This embarrasses internal respiration still more, and might be enough to overcome the organism. For this reason, the lightest form of nitrous oxide and oxygen analgesia is maintained, and the operation is done under novocain. They are given just enough gas to take away their anxiety and yet never render them unconscious. Local anesthesia alone, does not suffice because the nervous system is unstable anyway, and the kinetic drive is more than the patient can cope with. It is a common observation to see the heart rate of such patients go up to 150 or 160, while they are on the table waiting to be prepared. While local anesthesia alone was being employed in these cases at Lakeside Hospital, one such patient died on the way to the operating room, and another one died on the table before the operation was begun. To convey the patient to and from the operating room under analgesia, does away with this factor, but it prolongs the anesthetic, and this also is detrimental to toxic cases. The safest method is to move the operating room to the patients room, and do the operation in bed. This is now done whenever conditions permit.

The operation should be done as quickly as is compatible with safety and with just as little trauma as possible. The dictum of Moynihan's, "every pull gives a pain," is well remembered in these cases, because they are hypersensitive. Absolute hemostasis with as little loss of blood as possible, is well worth carrying out. The loss of a pint of blood in such cases is equal to a quart in stable patients. The use of 5 to 10 dozen small Haldsted clamps (clamping and then cutting) serves this purpose well. They may be tied off in bunches of 4 to 6 at a time.

FIG. 3.—Exophthalmic goitre. Young, flared type without any exophthalmus, and having only a slight enlargement of thyroid gland—the most difficult type to cure.
FIG. 4.—Exophthalmus to the extent of one eye actually bursting.
FIG. 5.—Exophthalmic goitre of several years' duration, showing typical facial expression of "burnt out" type.

A factor that is easily overlooked, is the question of wound secretion. At the time of operation, large quantities of thyroid extract must be forced into the circulation, and after the operation the raw surfaces of the gland exude a large amount also. For this reason, bad risk cases do very much better and have an easier convalescence, if the wound is packed open with flavine gauze and closed in from 12 to 24 hours. The practice of interrupted operation and delayed closure, will cut down the mortality on very toxic cases quite appreciably. By packing the wound with flavine gauze, the wound remains in good condition and there is not much more chance of infection than in a primary closure where a drain is necessarily left in.

The postoperative care comprises, first of all, at least 4,000 c.c. of water per day. Morphia has very little effect on the very toxic cases, because it is oxidized so quickly and may be given in large amounts at short intervals. Steam inhalations of compound

tincture of benzoin loosen the secretions caused by disturbing the trachea and make it easier for the patient to raise them. Blood transfusion is well borne if the condition of the patient is not good, or if the heart rate is going up.

Vomiting after 12 hours is a bad omen, and usually accompanies the other bad features of rising pulse, high temperature, restlessness, delirium and general dissolution. Ice bags, 4 to 10 applied according to temperature, and finally, an ice pack of 100 pounds of finely crushed ice, will control this in a large number of cases, and is the "court of last appeal." Remembering that with every degree rise in temperature, the metabolic rate increases 10 per cent, it is no wonder that these patients who have an increased metabolism already, burn up.

The disregard for post-hospital care, is the factor that is responsible for recurrences, provided enough of the gland has been removed. The patient should follow a daily routine, including definite periods of rest during the day, and the eating of simple food —avoiding highly seasoned and stimulating food, tea, coffee and dark meats. Fowl and sea-food are well tolerated. Social functions and all forms of excitement must be done away with. The removal of all focal infections, teeth, tonsils, intestinal stasis, etc., is a most important factor.

What benefit can the patient expect from surgical treatment? If the case has been handled as outlined above, and as much of the gland as possible has been removed, the immediate benefit is striking. Within from 48 to 72 hours, the patient notices that he is not as restless and that he can lie quietly in bed, and he is at peace with the world and takes on a different expression of the face. If sorrow, psychic disturbances, overwork, etc., are removed, he will secure permanent relief. Even if some of the adverse factors continue, he may expect a marked betterment.

A recurrence of the disease is always a reflection upon the surgeon, and means that he has not removed enough of the gland, provided the post-hospital routine has been lived up to. Considering the low mortality of less than 1 per cent from the primary operation and the immediate and permanent relief that can be expected, cases of hyperthyroidism may now be considered in the same light as those of acute appendicitis—the indication for operation is diagnosis.

ABSTRACT OF DISCUSSION.

Dr. J. S. McCelvey, Temple: Dr. Rushing brought out an important point in diagnosis and treatment, that is, the metabolic rate is of secondary importance to the clinical evidence. This is contrary to the views of many who believe that one should be guided almost entirely by the metabolic rate.

We cannot all follow Crile's method of stealing the operation upon the patient. Each man must use his own psychology to get the best results. Personally, I like to have patients begging for the operation with full confidence of recovering from the operation and disease. Confidence and optimism instead of depressing the patient is a great stimulant to them and adds much to the success. Operation is much preferable to the cure of goitre than *x*-ray. *X*-ray may be of value in desperate cases in getting a patient more fit for the operation; however, it should be used with caution, as excessive dosage might bring about a fatal reaction.

Dr. Walter Shropshire, Yoakum: I wish the essayist would tell us why iodine relieves the toxic type of cases—it seems like adding fuel to the fire.

Dr. H. L. D. Kirkham, Houston: I would like to ask Dr. Rushing whether the case he showed proved to be a true aberrant thyroid, or merely an enlargement of the superior lobe laterally, or of the pyramidal lobe. Should this be an aberrant thyroid, it would be in a most unusual position. Embryologically, the thyroid develops from a median outgrowth of the pharyngeal floor, the tubercula impar, and its migration is downward in the midline. Since aberrant thyroids are embryological remnants which have not migrated, it would be difficult to account for an aberrant thyroid as far laterally as the case shown by Dr. Rushing.

Dr. A. O. Singleton, Galveston: Dr. Rushing has given us a very thorough review of what is generally known as Crile's method of dealing with goiters. I I have not agreed entirely with this method, believing that not enough credit has been given to Dr. Crile and his workers for their skill, surgically and otherwise, and too much credit to the physical management of their patients. The clinic which has a great number of these patients to deal with and makes a special effort to develop efficiency in team work, will naturally secure better results. I feel very strongly that the preparation of the patient for operation other than the physical management is of very great importance. The metabolic rate is to my mind of great value and should be observed in all cases before operating. Also, the preliminary administration of iodine, rest in bed, proper feeding, and at times, possibly, *x*-ray treatment, may mean the secret of a successful operation and cure of goiter cases. Again, the gradual operation of these patients by ligation, one lobe resection at one time, and another lobe at another time, will enable one to secure a very low mortality in the treatment of goiter patients, where otherwise the mortality will be high.

Dr. Rushing (closing): I think Dr. Singleton is right; much of Dr. Crile's success is in his finger tips and in his organization. Rest, diet and proper management are all very essential. The *x*-ray makes the operation more difficult, as it tightens the gland. The administration of iodine is indicated if the goitre is not adenomatous; in pure hyperthyroidism it acts miraculously. The aberrant case shown was separate from the thyroid gland, although there is adenoma in one lobe of the gland.

Corpus Luteum—L. and F. Desiccated.—The fresh substance of the corporea lutea of the hog, dried and powdered without the addition of diluent or preservative. For a discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1924, p. 220. The product is marketed in the form of 2 and 5 grain capsules and 2 and 5 grain tablets. Lehn and Fink, Inc., New York.

GLAUCOMA AND PRESENTATION OF CASES.*

BY

J. GUY JONES, M. D.,
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In the entire field of ophthalmology, few diseases of so serious a nature as glaucoma are as insidious as it can be in its onset, more definite in its signs and symptoms, more serious in its results, and more amenable to early scientific treatment.

I will not discuss in detail the theories of the etiology of glaucoma, or the pathological changes which occur, other than the suggestion that the essential factor, hypertension, is due to an interference with the balance between secretion and excretion which occurs in the normal eye. Probably several factors enter, one of the most important is a sclerotic process occurring in the finer structures; or, as Hugh Stransky has suggested, in the simple cases there is a shriveling of the sclera, leading to a wrinkling of the lamina cribrosa, with consequent injury of the nerve fibers and there is not primarily an increase of tension. Another theory attributes it to a swelling of the vitreous. A very important contributory factor, is toxic absorption from foci of infection, in the tonsils, teeth, etc., or of products of imperfect elimination from the intestinal tract. Syphilis must not be overlooked, and it has been said that most of those cases under 50 years of age are due to this cause.

Since charting the field of vision in all suspected or proven cases is so important, not only in the diagnosis and prognosis, but in determining which plan of treatment to adopt, it is wise to review for a moment the anatomy and distribution of the nerve fibers in the retina. The optic nerve with the central artery and vein enter the globe through a defect in the sclera 15 degrees to the nasal side of the posterior pole. The defect is partially protected by a fibrous network, the lamina cribrosa. It is customary to describe the nerve fibers of the retina as nasal and temporal. The temporal division is divided into an upper portion (about 1/12 of the total nerve) called the supero-temporal bundle; a lower portion of equal size, the infero-temporal bundle, and an intervening bundle, the papillo-macular. The latter, occupying 2/3 of the temporal half of the disc, supplies a relatively small area in the retina, the macula and the area immediately surrounding it. The remaining temporal portion is supplied by the supero-temporal above and the infero-temporal below meeting along the horizontal raphe. Their fibers do not communicate but have a sharp boundary between them. There is a crowding of these bundles at their emergence from the papilla, rendering them more susceptible to pressure.

The visual acuity, depending upon nervous impulses, may suffer from a change in the perceptive end organs, which renders them less sensitive to light stimuli, or from a change in the conductivity of the nerve fibers. In the macular region, each cone has a direct connection with a single axis cylinder or neuron. Excentric to the macula, however, several cones share a single axis cylinder.

The blood supply of the inner retinal layer is derived from the central artery of the retina. The detours which the branches of this artery make in order to reach the extreme temporal region of the retina, have a distinct bearing upon the early loss of vision in the nasal field in glaucoma. The early changes produced in acute or congested cases are vascular and do not result in the characteristic visual defects of the chronic type. With the onset of hypertension the glial fibers suffer first and then disappear, and lastly, the connective tissues feel the strain. Thus we may find a pale nerve head resembling atrophy before evidence of cupping is demonstrable.

The occurrence of vascular crises in the chronic cases, of such slight intensity as to attract little attention either subjectively or objectively, can only be detected by careful periodical examination. If the tension is taken with some mechanical instrument at frequent intervals, a plus tension will be found. It is just such cases as these which are so often overlooked or incorrectly diagnosed, until the shadows of darkness have drifted, unnoticed at first, but later so rapidly that the patient is frequently hurled into total darkness, perhaps only in one eye, before he seeks advice.

In the congestive varieties, visual disturbances are due largely to clouding of the media and to disturbance of the retinal circulation. As the pressure rises, the stasis becomes more marked and may be so severe as to cause blindness in a short time. In the more slowly developing types, the earliest change in the visual field is a contraction of the nasal half, due to a constriction of the circulation in the temporal retina. In the acute cases, this contraction being vascular, clears up under proper treatment; in the chronic cases, it is permanent or nearly so, due to nerve degeneration. Peters recognizes the following departure from the normal field: first, early loss of the nasal field; second, sector-like defects of the superior or inferior

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, April 30, 1924.

nasal quadrants; third, enlargement of the blind spot (Bjerrum's sign); fourth, concentric contraction of form and color; fifth, preservation of central vision even though peripheral fields are cut to a small central area, and sixth, complete loss of the peripheral field with preservation of a small temporal area, or a total loss of central vision.

CASE REPORTS.

Case No. 1.—Mr. B., aged 52 years, was examined, in November, 1923, and gave the following history: In 1915, he consulted an oculist for a "dropping of lids," who fitted glasses and found nothing wrong with the patient's eyes. His glasses were changed in 1918, and again in 1921. Two months later, his trouble was diagnosed as acute glaucoma and his eyes treated for some months; his glasses were again changed. He was told that the right eye was not then, and probably would never be, affected and that he would probably have no return in the left eye. After this he experienced a few passing headaches, never severe and seeming to have no connection with his eyes. In July, 1921, he consulted a third oculist who confirmed the diagnosis of glaucoma and advised immediate operation on the bad eye and removal of his tonsils, which were infected, saying that he would be blind in 5 years if it was not done. He refused this excellent advice and returned home, where the tonsils were later removed with benefit.

The vision in the left eye gradually became weaker but passed unnoticed until December, 1922, when vision in the right eye had failed perceptibly and in February, 1923, had decreased to such an extent that he again consulted his home oculist. The family doctor was called in consultation, and the patient was told that his failing vision was due to high blood pressure which, when relieved, would correct the eye trouble. After several months of restricted diet and rest and a visit to the coast, he not only had failed to improve but had grown worse. He was using eserin in his eyes daily, and had been told that so long as the medicine controlled the tension and kept his pupil normal, he should not have his eye operated upon.

Upon examination we found that the vision of right eye was 20/200; of the left eye, nothing. The anterior ciliary veins were engorged, the pupils moderately contracted, the anterior chamber shallow, and there was a beginning opacity of the right lens. Enlargement of blind spot was noted and contraction of the nasal field to the fixation point, in the temporal field 30 degrees, upward 25 degrees, and downward 20 degrees. Tension in the right eye was 52, in the left 62 (McLean). The fundus of the right eye showed cupping and pallor, indistinctly; that of the left eye, marked atrophy and cupping of about 4 diopters. He was given vigorous preparatory treatment for four days, when an iridectomy was performed on the right eye, November 8, 1923. Twelve days later, the tension was reduced in the right eye to 40; the tension in the left was 65. The lens, however, gradually became more opaque and vision in the right eye decreased to light perception and projection. On his return in January the tension of the right eye was 32, of the left 60. On January 18, tension of the right eye was 32, of the left 62. The cataractous lens of the right eye was removed a few days later. Due to retention of some of the cortical material, there was an increased tension. The eye was opened and this was washed out. On March 18, 1924, examination of the right eye showed the anterior chamber deep, the pupil clear, tension 35, and vision consisted in counting fingers at 3 feet. The tension in the left eye was 92, and this eye was operated on the next day.

Case No. 2.—Mrs. E., aged 52 years, was examined, January 25, 1923, when she gave a history of failing vision, being otherwise in perfect health as far as she knew. Her teeth had been extracted several years before on account of neuralgia. She had never had a sore or inflammed eye. On examination the vision of right eye was 20/70, of the left eye 20/100; the tension, as determined manually, was apparently not increased, the sclerae clear, and the pupils normal in size and action. The fundus showed undue pallor but no cupping. The Wassermann was negative. A tentative diagnosis of atrophy was made and she was given potassium iodide, ten drops, three times daily. A plus 1.75 sphere with a plus 2.00 added for each eye, gave a vision in the right eye of 20/30, and 20/50 in the left. She was advised to report every two or three weeks for observation; she returned February 1 and March 1, 1923.

She came for a change of glasses November 12, 1923, with the statement that she could read easily and could see the eye of a needle but she was unable to thread it. Recently, it had been almost impossible for her to get about, even in the house, as she would stumble and run into things in her path. The vision of the right eye was 20/100; of the left eye, light and objects. She was wearing the same glasses with which she could read 20/30 with the right eye, but with no improvement in left. The pupils were slightly dilated and sluggish, the fundus showed a distinct cupping of each nerve and a crowding of the vessels to the nasal side, and the tension of the right eye was 45, and of the left 55. The right field showed 5 degrees nasal, 15 upward, 35 temporal and 10 below, with enlargement of the blind spot; the left field showed a small area below the horizontal in the temporal field, in which objects were indistinctly seen. On November 22, 1923, an iridectomy was performed on the right eye; on November 28, tension in the right eye was 38, in the left 62, the field of the right eye had improved slightly, probably due to clearing of the media. On December 14, 1923, the field remained the same; tension in the right eye was 35, in the left 55. On December 20, 1923, a corneo-scleral trephine with a 1 m.m. opening was done on left eye. On January 3, 1924, the field in the right eye was the same as on December 14; in the left, probably a slight increase in the visual field. The tension, on January 19, 1924, was 30 in the right, and 35 in the left, with the original glasses and the vision in the right eye was 20/30, in the left 15/200.

Case No. 3.—Another case equally interesting but not so tragic as those above was that of Mr. C., aged 51 years, who on August 21, 1919, had a vision in the right eye of 20/30, and in the left eye of 20/20. Under homatropine, —050—50c.×90 gave a vision in the right eye of 20/20; vision in the left eye with a plain glass was 20/20, and plus 100 added. On May 22, 1923, the patient returned for reading glasses but stated that nothing could be done for his right eye, since he had a cataract in that eye. For the past several months he had been unable to shave equally well on both sides of face. He had had no pain or discomfort of any character, except after loss of sleep his eyes would be some redder than usual. On examination, the vision in the right eye consisted in perception of objects to his right; in the left eye, 20/20 plus. The anterior ciliary veins were tortuous and distended, the pupils dilated, the right being inactive and showing a greenish grey reflex resembling to some extent an opaque lens. Tension

in the right eye was 55; in the left 25. In the temporal field there was a small area of vision; the left field was normal. The right nerve was very pale and showed a cupping of 7 diopters; the left was normal except for one vessel, making a suggestion of a bend downwards. He was told of the importance of strict observation and rigid treatment, having refused immediate operative procedure.

Repeated tests show the following: On December 18, 1923, tension in the right eye was 55, in the left 25; on December 28, in the right eye 62, in the left 32; on January 14, 1924, right 75, and left 23; on February 15, right 70, and left 30, and on February 28, right 65, and left 28. There has been no encroachment on the left field. The right eye was trephined with a decrease in the tension to 30.

This brings us to a brief discussion of what course to pursue in the management of these cases. The first thing is to impress the patient with the seriousness of the disease and the importance of strict observation and compliance with instructions. Glaucoma rarely attacks both eyes simultaneously, but ultimately both are involved. It is always progressive, very slow at times, at others fulminating, and if not corrected by treatment leads to total blindness. Search for and remove, if possible, every source of toxic absorption. Request a thorough general examination by a competent physician.

When and how long are we justified in using miotic treatment. If the case is an operative one, which operation is most suited to the case in hand? Elliott says that "more eyes have been lost with miotic treatment than all other methods combined," but the judicious use of miotics under the watchful care of a competent oculist where the vision, the fields and tension are frequently taken, is justifiable if the patient is intelligent and faithful to his trust. The limit of medicinal treatment is said to have been reached when 1/4 of 1 per cent eserin, instilled three times a day, fails to prevent encroachment of the field and maintain a low tension. Herbert states that after the tension has been kept normal for several months, all the improvement possible has been obtained, and that operative treatment of some kind is imperative and more or less urgent in every case of primary glaucoma. On the other hand, generally speaking, unless fingers can be counted with the hand held fairly close to the eye, usually in the outer field, it is too late for visual benefit to be derived from operation. The size of the field determines to a large extent the results to be expected. Marked improvement often follows a very imperfectly performed operation, while in some cases, the atrophy continues and vision steadily decreases even though a perfect operation has been performed.

A diminution of the field for form, with or without enlargement of the blind spot, is an urgent sign for operation. The higher the tension and the longer its duration, the greater the blockage of the normal outflow and the larger the vicarious outlet must be. As a rule, it is not necessary to operate during the height of an acute attack, as the tension may be relieved sufficiently by other means. After a few days the operation can be performed with more ease and less danger of complication.

The operation which gives most relief in the average case is an iridectomy made well back, through a small incision, with often a deliberate iris inclusion. This is especially true in the more acute case. One of our most perfect results was an acute case in which a small peripheral iridotomy was performed. The consensus of opinion is in favor of sclerectomy or corneo-scleral trephine where the tension is low, and in the simple and chronic cases. It is necessary in all cases to impress upon the patient the importance of occasional observation and that further treatment may become necessary.

ABSTRACT OF DISCUSSION.

Dr. H. L. Hilgartner, Austin: Michael Goldenberg, (*Illinois Medical Journal*, March, 1923), discusses the various surgical procedures for the relief of glaucoma. He believes that the number of new operations is evidence that we have not yet found a satisfactory one. We are just as much in the dark as to the etiology of glaucoma.

J. Dunn, (*American Journal of Ophthalmology*, May, 1922) maintains that glaucoma is produced by swelling of the vitreous, such a condition being compared to swelling of the lens and depending upon the same cause—changes due to age and an undetermined state of the blood. T. Faith, (*American Journal of Ophthalmology*, May 1922) speaks of the difficulty in differentiating between glaucoma and uveitis with plus tension. He thinks the age of the patient, the absence of prodromal symptoms, the involvement of one eye only, lack of corneal haziness, and deep anterior chamber should be taken into consideration. If tension is complicating a uveitis, atropine is indicated. He believes that some of the cases which are treated with pilocarpine and iridectomy belong in this category and would be relieved by the early use of a mydriatic.

Imre's (*Zeitschrift F. Augenheilkunde*, XLV, No. 5, 1921) studies concerning the regulatory action of the endocrine glands upon the intraocular tension, started with his observation of a pregnant woman who, without known cause and in spite of a good general condition, developed a serious bilateral hypotony with secondary keratomalacia. He ascribed this hypotony to a hyperfunction of the hypophysis, and he found low intraocular tension in two other cases of hyperpituitarism. He found that increased and decreased function not only of the hypophysis, but also of the thyroid and of the ovaries exert influence upon the intraocular tension. He obtained good results in a series of cases of glaucoma, from treatment with thyroidin. When this did not act satisfactorily, or was productive of unpleasant symptoms, reduction of the tension was obtained by the administration of hypophysis tablets, or the injection of extracts of the testicles or ovaries.

A long list of efficient or contributary causes of glaucoma might be cited. In view of the many and various possible causes, glaucoma should not be re-

garded as a disease in itself, but as a symptom of various causative lesions, each of which in turn may be the effect of a different disease. In each case, therefore, after determining the specific lesion or lesions, the causative disease should be searched for.

A man 45 years old, gave a history of an attack of glaucoma which had been relieved by a well performed iridectomy. One year later he consulted me. He was suffering from another attack of hypertension. Suspecting some systemic condition, I secured a general examination by a competent internist. This revealed nephritis, and proper treatment for that disease—without any operation—was followed by entire cessation of the tension and the recovery of normal vision.

Dr. J. H. Burleson, San Antonio: I think Dr. Hilgartner sounded the keynote when he referred to the fact that glaucoma should be regarded as a symptom. With respect to that phase of the disease, it has occurred to me that we pay too much attention to focal infection in the establishment of the causation of glaucoma. There are a good many things which can produce an increase of tension. I think that there is a neurotic element in a great many cases. It is well known that women are more prone to glaucoma than men. I believe this can be accounted for by the fact that women have a great deal more trouble in the pelvis than men. When we examine a woman who has had two or three pelvic or abdominal operations, we will find not only a neurasthenic, but one who has a plus ocular tension.

Some years ago, a man came to me with an acute glaucoma and I advised an operation at the earliest possible moment. His reply was, "I have had this several times before, and I only wanted to know if I had an increase of tension. I have a stricture and when it gets tight, my eye tension goes up." Ten days later, he returned with normal tension, after having had his stricture dilated.

The depth of the anterior chamber should always be carefully noted; with a deep anterior chamber there is often a disturbance of the uveal tract, which can be controlled by proper treatment. A case of increased tension with a shallow anterior chamber, should be operated at once and not treated until after the operation. With regard to the possible restoration of vision, which is a very important thing to the patient, the time to operate is always early. I think we are justified in promising a patient something in an acute condition, as long as there is light perception. After a well performed iridectomy, the patient will often obtain useful vision; in chronic conditions operation will do no good.

Dr. F. D. Boyd, Fort Worth: There is hardly any disease which is so thoroughly misunderstood as glaucoma. These cases are not seen until changes have taken place that are hard to overcome. They generally have glaucoma some time before we see them. I am inclined to believe with Dr. Hilgartner that glaucoma is not a disease but merely a symptom or a group of symptoms. Oftentimes glaucoma may be relieved if you do not rely so much on eserin. I am a firm believer in iridectomy which should be broad enough to relieve tension by drainage through Schlemm's canal. In a number of cases I have tried to operate upon both eyes at the same time. If we could see these cases early glaucoma could be relieved more frequently than it is. It is one of the most serious diseases that we have to treat. I operate early in these cases and give my patients all the chance they should have. It is a hard matter to ascertain all the causes of glaucoma.

Dr. Newton H. Bowman, Waco: Endocrin theory with reference to its influence on glaucoma is possibly a partial analysis of the cause contributing to glaucoma. We have had a number of opportunities to observe glaucoma. An altered glandular function may possibly be a factor. There is often a very high blood-clotting time in these cases. I had a glaucoma case with bad tonsils, in which I noticed that the clotting time was high, namely, three minutes. In another case the blood-clotting time was less than normal, and in only one case was it less than three minutes. There may be others who have observed the same thing.

Dr. I. F. Cannon, Mart: Glaucoma is often a systemic disease with local manifestations, and we are often in the dark as to how to handle these cases. I had a patient who had a very mild attack, only a slight heaviness over one eye. The ocular tension was not marked and I could not make up my mind what to do. When the second patient came, I was sure that he had a case of glaucoma and referred him to another oculist. The tension was gone and the oculist suggested that the case be kept under observation. (If we are going to recognize glaucoma as a symptom, then the early stage is the time to do your work and this cannot be done by observation). The attacks returned and eserin gave fair results. If an agent such as eserin increases the elimination through the canal of Schlemm, this proves that there is a hypersecretion. If the cause of the hypersecreation is removed the eserin may be discontinued. If the cause of hypersecretion is not removed the patient will go blind.

Dr. Louis Daily, Houston: Cyclodialysis is a frequently employed operation for glaucoma. It is much simpler, and also much safer, than iridectomy, when the tension is high and hemorrhage is feared. If relief is not permanent, the operation may be repeated, or it may be used as a first operation, to be followed by iridectomy later. We lately did a cyclodialysis on a woman, one of whose eyes was in a state of absolute glaucoma, and whose good eye had the fields contracted almost to the central point. We were afraid to begin with an iridectomy in this case. Cyclodialysis reduced the tension, and later we shall do an iridectomy, which should be done with a spatula, the iris being separated for half its circumference.

Dr. R. H. T. Mann, Texarkana: We do not know the cause of glaucoma, and therefore our treatment, except in acute cases, is unsettled. I believe in performing an iridectomy in acute cases of glaucoma. I do not believe that an iridectomy does much good in chronic cases, certainly not in the advanced chronic cases. Every patient suffering from glaucoma should have an examination made by a competent internist, before any treatment is instituted.

A lady was referred to me some time ago by an oculist. She had lost the vision in one eye from what he said was glaucoma. She had had this eye treated for two years with eserin, without any result. When she came to me the lens looked opaque, as is often the case in glaucoma. There was a deep optic cup, the iris was tied down to the capsule of the lens by adhesions, and she had had many attacks of iridocyclitis. In the other eye there was no cupping of the disc, but there were deposits on the capsule of the lens, and she had had attacks of iridocyclitis in this eye as well. A blood Wassermann was negative, but a spinal fluid Wassermann was positive. Had this woman had a vigorous antisyphilitic treatment in the beginning, her eyes would not have been in this condition. I have seen an iridectomy performed in a number of cases of chronic glaucoma, and most of these patients have in time lost their vision. In many of the chronic

cases of glaucoma the vision remains stationary for many years after some form of trephine operation. Before the trephine operation came into use in this class of cases, there were six men on the staff of the Royal Ophthalmic Hospital at London that did an iridectomy in cases of chronic glaucoma and six that did not, showing that opinion was equally divided as to the results which could be obtained.

Dr. W. R. Thompson, Fort Worth: It is a life-saver to many physicians to have an excuse for failure. Unfortunate is the doctor who sees these glaucoma cases early and does all that he can, but whose patient loses his sight, notwithstanding. Many of these cases go to the bad in spite of all treatment. I have had some cases of lost or greatly impaired vision, which have had every opportunity for recovery, including laboratory tests, and the examination and advice of competent internists.

Dr. John O. McReynolds, Dallas: I should like to emphasize the point brought out by Dr. Thompson, that the prognosis varies enormously in different types of glaucoma and in different individuals. Sometimes, even the most timely interference and the most skillful management may utterly fail to arrest the progress of the malady. I shall never forget the tragic case of the great Javal, of France. When I first saw him in his laboratory in the Sorbonne, in 1894, he was blind in one eye from glaucoma. Despite the skill of the most distinguished ophthalmic surgeons of the world, he finally lost his fight for vision and was compelled to spend his last years in utter darkness. His genius had brought light to thousands of others, and yet it was the decree of fate that his last and melancholy service should be the writing of his little book, "On Becoming Blind," to show others the philosophy of courage in finding happiness and even helpfulness to others, when smitten with such a depressing calamity.

Dr. J. M. Woodson, Temple: I wish to emphasize a point brought out by Drs. McReynolds and Thompson. We want to save our patient's vision if we can, and the responsibility should be divided by having the very best possible physical examination, so that we may find out all we can about the patient in order to treat him intelligently. Many of these cases can be remarkably helped by treatment of abnormal conditions of the gastro-intestinal tract. When these disorders are relieved, the patients get better results than can be expected by any manner of exclusive local treatment. The internist should share the responsibility of ferreting out the sources of trouble. Unless we have a consultation of this sort, we are not giving our patient the best chance for recovery.

Dr. Jones (closing): We have about passed the point where we believe that the fluid leaves the eye entirely through the canal of Schlemm. It was formerly believed that the opening of this canal would improve elimination of the fluid. These patients are always sick from other causes—from infections, endocrine disturbances, or some other trouble. Why should we fail to remove the tension, that is, get rid of the effects, while we are searching for the cause? These cases should all be operated while searching for the cause, which can be removed later. After the operation we must use miotics.

Standard Radium Solution for Intravenous Injection, 5 micrograms Ra.—Each ampule contains radium chloride-Standard Chemical Co. (New and Nonofficial Remedies, 1924, p. 277), equivalent to 5 micrograms of radium element in physiological solution of sodium chloride, 2 c.c. Radium Chemical Co., Pittsburgh.

ETIOLOGY, DIAGNOSIS AND TREATMENT OF CHRONIC CHOLECYSTITIS.*

BY

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DALLAS, TEXAS.

Since medicine and surgery have met as friends at the operating table, such diagnoses as "neuralgia," "gastralgia," "acute indigestion," and even "ulcer of the stomach," have been made with less frequency.

Moynihan is authority for the statement that for every gastric ulcer there will be found, at the operating table, 4 or 5 duodenal ulcers and 5 or 6 cases of gall-stones. It has also been stated by various authorities that of all the women coming to autopsy, from 5 to 12 per cent have gall-stones, and that this percentage is higher if women under fifty years of age are excluded. It must be apparent that there are many more persons in the "pre-calculous" stage of gall-bladder infection and even more still who have chronic gall-bladder trouble. The stomach, itself, is an organ full of sympathy for its visceral friends and hardly any organ or viscera connected with the intestinal tract can be affected without the stomach playing a part in the symptomatology. It usually does this by pouring out a profuse secretion and by very irregular, and oftentimes riotous activities. In other words, even when not diseased, the stomach often speaks so loudly that its voice is heard above all others. These statements are made to emphasize the fact that even the most careful clinicians are not making the diagnosis of gall-bladder diseases often enough.

ETIOLOGY.

In considering the etiology of this condition, it is necessary to consider briefly the physiology of the biliary system. In the beginning it should be noted that the gall-bladder itself develops embryologically as a diverticulum of the biliary system; it is probably not a vestigial organ. Its normal capacity is about 30 c.c. of bile or 5 per cent of the total daily output. The function of the gall-bladder, then, is manifestly to store bile and, according to Rous and McMasters, it has the function also of concentrating the bile in a manner that is most amazing. Meyer, at the Hooper Foundation, has shown that the gall-bladder wall shares with the liver the function of removing bacteria from the blood stream.

These considerations make it very evident that the functions of the gall-bladder render it very susceptible to infection. It must also be seen that the welfare of the gall-bladder is

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dependent to a certain extent upon the character of the bile. The bile in turn is contingent upon hepatic function—in other words, upon the integrity or the health of the individual liver cell. The health of the liver cell then must depend upon its blood supply through the hepatic artery and that for which it must perform a function, which comes through the portal vein. The purity of the hepatic blood supply will then depend upon extraneous areas of infection, especially in the mouth and upper respiratory passages; the portal area will be affected by the intestinal contents and by infections in the intestinal walls or other zones of infection associated with the gastro-intestinal tract.

McCarrison fed laboratory animals (pigeons) autoclaved food and then demonstrated lesions in the wall of the intestine and the organisms in the act of entering the blood stream.

Rosenow's work on the selective localization of bacteria is now too well known to be subject to question. He demonstrated that a gall-bladder strain of organisms when injected into laboratory animals, localized in the gall-bladder in 80 per cent of the cases, and furthermore, that 29 per cent of the animals receiving the gall-bladder organisms, showed lesions in the stomach or duodenum. Also gall-bladder disease was produced in 21 per cent of the animals receiving ulcer strains. This affinity of organisms for the stomach, duodenum, and gall-bladder explains the frequent association of these lesions.

Another phase of gall-bladder exposure to infection must be considered in this connection, namely, selective elimination of bacteria. Years ago, Richet called attention to the elimination of bacilli of the typhoid and colon groups through the liver and bile passages. More recently, Meyer, Neilson, and Feusier, have observed that from 20 to 30 per cent of typhoid bacilli injected intravenously into laboratory animals were found in the liver in from 15 to 20 minutes after injection. Richet examined 408 gall-bladders removed at operation and found that 51 per cent of them showed a positive culture from the gall-bladder wall. Of this number, mouth streptococci (mitis and salivaris) occurred twice as frequently as the intestinal streptococci (faecalis). Deaver, Reiman and Scheele have made similar observations and in addition have found bacteria not only in the gall-bladder wall but also in the pericholecystic bands and adhesions.

Sherrington claims that damage to the hepatic cell is preliminary to the appearance of bacteria in the bile. The role of bacteria in the bile is not certain because it has been demonstrated that the gall-bladder is not easily infected through its mucous membrane. Graham has proven that the gall-bladder infection usually results from a lymphangitis, not only of the liver itself but also of the pancreas. The association of hepatitis and pancreatitis with chronic gall-bladder disease has long been known. In some of these conditions, however, the degree of inflammation of one of the former would indicate that the gall-bladder infection might have been secondary. As a predisposing cause, a history of typhoid fever, tonsillitis, sinusitis, empyema, purulent appendicitis, and other severe infections should be considered.

To enumerate briefly, the causes of gall-bladder infection may be considered as due to: (1) focal infection; (2) abnormal conditions of the blood stream; (3) impaired health of the hepatic cell; (4) also that will-'o-the-wisp, hypercholesterolemia. The conditions in which this is most often noted are syphilis, diabetes, arteriosclerosis, late pregnancy, and post-typhoid fever, (5) jaundice. There is now evidence, which is all but conclusive, that indicates that jaundice, except in the very mild types, entails a definite liver cell injury, and finally, (6) so-called biliary stasis. This, of course, may be due to a number of conditions as sedentary habits, gastro-intestinal stasis, ptosis, etc.

A discussion of biliary stasis entails a discussion of the manner in which the gall-bladder empties itself—a well worn subject in which little has been agreed upon. The musculature of the gall-bladder does not permit of strong contraction, and as the intra-gall-bladder tension is normally only about 30 mm. of water, one naturally wonders why the gall-bladder ever empties at all. However, the intra-gall-bladder tension may be increased by retching, vomiting, or struggling to the enormous extent of 1000 mm. of water. It has been estimated that the liver secretes against a pressure of from 200 to 300 mm. of water. It is probable that the gall-bladder contents trickle out when the intra-duct tension is lowered by relaxation of the sphincter of Oddi. The gall-bladder musculature probably makes little more pressure than is needed to take up the slack, so to speak, and that intra-abdominal pressure, acting on the exterior of the gall-bladder produces a certain amount of propulsive influence on the bile. This would be consistent with the benefits resulting from exercise in persons suffering from biliary stasis.

DIAGNOSIS.

The starting point is the patient's story. For convenience of description, the diagnosis of chronic gall-bladder conditions should be

divided into those cases in which gall-stones are present and those in which gall-stones are not present. The typical attack of biliary colic would hardly be mistaken by anyone.

Cheney divides gall-stone patients into three classes: Those with recurring attacks of colic with good health in the interim; those with recurring attacks of colic with chronic stomach disorder between the attacks; and cases with chronic stomach trouble without colic and with, or without local symptoms. Biliary colic may be imitated by (1) syphilis of the liver, (2) gastric crises of tabes, (3) diaphragmatic pleurisy, (4) angina pectoris, (5) renal colic, (6) appendicitis, and (7) herpes zoster. It must be admitted that gall-stones are occasionally demonstrated at operation or autopsy in cases in which the disease gave no symptom so far as elicited.

In the diagnosis of chronic cholecystitis without stones, a great many all but insignificant factors must be considered. A patient's attack of supposed ptomaine poisoning arouses suspicion. A pain which awakens a patient from a sound sleep must be regarded seriously. The patient who has belching and bloating and who occasionally feels bilious, who has a good appetite but who is afraid to eat, should not be dismissed as a neurotic. Frequently, a patient may have indigestion after a fast and have no indigestion at all after a Thanksgiving dinner. Often an article of food causes discomfort or heartburn at one time and no symptoms whatsoever at another. Hartman believed that dyspepsia characterized by gas in the upper abdomen, belching, and some regurgitation occurring from 20 to 30 minutes after a hearty meal, or after the ingestion of some specific article of food such as raw apple, cabbage, or greasy food, is, with few exceptions, as characteristic of gall-bladder disease as gall-stone colic.

The physical examination may reveal the characteristic localized symptoms; however, a history of dyspepsia with a negative examination of the entire body is not inconsistent with chronic gall-bladder disease. The *x*-ray examination will help to exclude gastric ulcer, cancer, syphilis, and benign tumors of the stomach. Also, indirect evidence may be obtained, such as, cardiospasm or pylorospasm; deformity due to pressure or adhesions of the duodenum in which duodenal ulcer is not demonstrated. Routine examinations of the urine, blood and stool will give additional information, namely, bile in the urine, excess fat in the stool—light colored stools—or other explanation of symptoms, as parasites. The blood may reveal a pernicious anemia or eliminate the same and syphilis. The colon practically always gives symptoms in chronic gall-bladder disease, chiefly, a chronic spastic constipation. Other colonic symptoms are less characteristic.

The gall-bladder drainage must be considered as a link in the diagnostic chain. It must be admitted that the "A," "B," and "C" fractions of bile are only made in a relative manner. The sterilization of the mouth, esophagus, and stomach is bacteriologically unsound; however, the finding of epithelial and pus cells, or as Rehfuss has tritely said, "a puree" or leucocytes with precipitated bile salts and cholesterin crystals, must be information highly worth while. In the gross, the color of the bile and the quantity of sediment, mucus and turbidity must be considered.

No great dependence can be laid upon gastric analysis. Mussey and Brock analyzed a series of cases and their findings are as follows:

	Cholecystitis.	Cholelithiasis.
Achylia	17 per cent	24 per cent
Hypoacidity	16 per cent	20 per cent
Normal acidity	55 per cent	47 per cent
Hyperacidity	12 per cent	9 per cent

Occasionally it is impossible to differentiate chronic cholecystitis from appendicitis. The relation of appendicitis to cholecystitis is well known. They may be affected simultaneously, though usually in sequence. The systemic symptoms of the two diseases are identical, namely, a reaction to inflammation; the reflex gastric symptoms are practically the same. Only the localizing symptoms, when present, differentiate.

In considering differential diagnosis of any gastric disorder, the functional gastric neuroses must be eliminated. The distress in these disorders is usually immediately after eating and not at the 20 to 30-minute interval of cholecystitis, nor at the 2 or 3-hour interval of ulcer or appendicitis. Again, that ever-present, environmental influence which acts as an aberrant impulse affecting either end of the reflex arc, may modify the symptoms of chronic gall-bladder disease.

TREATMENT.

The treatment of chronic cholecystitis is never all medical nor all surgical; it must not be forgotten that chronic cholecystitis is mainly featured by infection and calculi formation. These may or may not be associated and both of them are probably secondary to a series of infections in the body elsewhere and mechanical disturbances in the lower intestinal tract. In other words, the chronic cholecystitis is a by-product.

To treat this condition without going behind the scenes to assail its cause, is to doom one to failure. The other foci of infection must be eradicated. The various water cures, the improvement of gastro-intestinal func-

tion, and even duodenal drainage, simply mean more complete and vigorous intestinal elimination. This is to cleanse the field which the portal system drains. How else could an infection in the wall of a gall-bladder be influenced? In this condition the muchly cherished egg diet must become unpopular; the high fat and high cholesterin diet must be regulated. The French give a diet of cereals, vegetables and fruits (always well pulverized), and skimmed milk. On account of the colon retention, only an optimal amount of protein should be allowed. Cholagogues, alkalies, and belladonna are useful when indicated. Regular exercise is beneficial except when myocarditis is present.

Medical treatment may be expected to relieve the catarrhal infections, the biliary stasis, and the alteration of gastro-intestinal function with functional disturbance of the liver and gall-bladder. A patient refusing or unable to undergo surgery may be rendered more comfortable and, for a period, immune to gall-bladder attacks, but he should be warned that the danger of his condition becoming incurable is very great. Patients with menopausal storms, hypertension and myocarditis of severe grade, are best served medically, as a rule.

We should urge operation when medical treatment fails. Ultra-conservatism should not be practiced, for it must be borne in mind that hepatitis and pancreatitis are probably increasing hand in hand with the gall-bladder infection. It must also be borne in mind that the gall-bladder itself may act as a focus of infection. This has been proven time and time again by the improvement of certain cases of arthritis, myocarditis, and certain forms of headache and dizziness, after cholecystectomy. In the presence of gross organic changes in the right upper quadrant, and by all means, in the presence of stones, surgical treatment should be recommended. Hartman is even more bold and asserts that the only treatment is "surgical treatment, for chronic cholecystitis is a definite inflammatory entity exactly like appendicitis." This statement seems to merit more serious consideration than it has received. The appendix, by its treachery, forced the issue long ago. The result was one of the most brilliant triumphs of surgery; not only are hundreds of lives saved daily but untold suffering in the form of chronic indigestion is also averted.

The similarity and close association of appendicitis and cholecystitis has already been discussed. Some of the most brilliant cures of indigestion I have ever seen have been by early diagnosis and early removal of diseased gall-bladders. All of us have seen too many failures from late diagnosis and late surgery. Then what is our duty? I am convinced that it is our plain duty, as medical men, to use every method at our command for making our gall-bladder diagnoses early and complete. The diagnosis having been made, any given case should be considered as belonging to one of two classes, the functional or cartarrhal and the organic gall-bladder disease. The former class of patients should give medical treatment a thorough trial; the latter should be urged to accept immediate surgical treatment.

To illustrate some of the unusual and difficult features of gall-bladder disease, I beg to report the following case in some detail:

CASE REPORTS.

Case No. 1.—J. F. S. was admitted to the clinic, April 30, 1923, complaining of nausea and vomiting, 30 to 60 minutes after eating, loss of appetite, loss of weight, weakness, and shortness of breath. This patient was 59 years of age, married, and gave a negative family history and a negative personal history, except that he had had influenza in 1919 and dated his present trouble from that infection. It is noteworthy that the patient complained of no pain at all. He recalled only one mild attack of indigestion which came on shortly after eating a very heavy meal a number of years ago. The vomited food appeared unchanged except that it was yellow or greenish in color and was extremely bitter to the taste. He had no fullness or gaseous eructations; his bowels were quite regular and he had never been jaundiced. His best weight had been 180 pounds, eighteen years ago, and his usual weight 148 pounds; although he continued to lose and a short time prior to the operation weighed only 135 pounds.

Physical examination revealed a pale, sallow, emaciated man. A soft systolic murmur was heard over the base of the heart; the abdomen was entirely negative, no tender points, and the physical examination otherwise negative. The blood count showed hemoglobin, 30 per cent; red cells, 1,556,000; marked poikelocytosis and anisocytosis, leucocytes, 4,500; differential not remarkable. The Wassermann was negative and the urine negative except for a heavy trace of albumen. Gastric study of the case revealed a bile-stained gastric contents with a trace of free hydrochloric acid, the bile interfering with the color reaction. The pancreatic ferments were greatly diminished, only traces being found.

The first gastro-intestinal *x*-ray examination showed the pylorus gaping, the duodenal cap small but regular, with apparently some thickening of the walls of the stomach near the pylorus. This examination was very unsatisfactory on account of the extreme weakness of the patient. Upon a second examination the duodenal cap was found to be large and regular, and the second portion of the duodenum was dilated. The test meal moved smoothly through the first, second and third portions of the duodenum to the duodeno-jejunal junction, at which point its progress was halted for a considerable time, and a strong reverse peristalsis carried a good deal of the meal back into the stomach. The röentgenologist suggested that this indicated pressure and partial obstruction of bowel, possibly due to carcinoma of the pancreas. The clinical diagnosis was pernicious anemia, with a possibility of pancreatic carcinoma being considered.

The patient was admitted to the Baylor Hospital, May 1, 1923, and put under careful medical treat-

ment. His gastric symptoms continued, no response being obtained from either acids or alkalies. The duodenal tube would not pass the pylorus, hence biliary drainage could not be accomplished.

The patient was transfused on May 19, and showed some improvement therefrom. The family was advised of both the very serious outlook and the grave risk that surgery would entail. After continuing on medical treatment for a trifle more than three weeks, the patient and his family became so uneasy as to the outcome that surgical aid as a last resort was implored. With this in view, the patient was again given a blood transfusion and the abdomen opened under local anesthesia. To the amazement of everyone concerned, the pancreas was found to be entirely negative and a large thin-walled gall-bladder presented itself. There were very extensive adhesions involving the second portion of the duodenum and the hepatic flexure of the colon. The duodeno-jejunal junction was entirely free of obstruction. The stomach and bile ducts were negative. Terrific spasm of the pylorus was noted, which relaxed reluctantly, even under the gas-ether anesthesia with which the operation was completed. The patient's convalescence was watched with some skepticism; however, his improvement was marvelous to behold. The marked salivation and the excessive spitting up of food and saliva ceased almost immediately. After careful nursing for one month, the patient was given another transfusion to boost him up for the trip home and on June 22, practically seven weeks after his admission to the clinic, the patient returned home.

His convalescence continued in a very satisfactory manner. His weight and strength were regained, and in August he wrote the clinic that he weighed 165 pounds and was feeling quite well. On November 20, he paid the clinic a social visit and at our request consented to have his blood examined. His hemoglobin was between 85 and 90 per cent; his red cells were 4,390,000; and his leucocytes 10,000. The differential count was normal in all respects. His actual weight was 182 pounds; and I consider this patient entirely well.

Dr. Underwood (closing): We are using the Lyon method of duodenal tube drainage from one to four times per month, and consider it a valuable adjunct in the treatment of cholecystitis. Alkalies are given both for antacid and gastric sedative effect. Belladona frequently relaxes an overactive or spastic pyloric sphincter. We use bile salts routinely; hydrochloric acid less frequently. A diet poor in fat is given but milk and butter fats are allowed in moderation. The patients are warned against fried foods, condiments, pastries and pickles. I feel that we should make every effort to classify these cases early. If not, an advanced cholangitis may develop before they come to operation. Where the gall-bladder has been removed early, our problem is not so difficult. Patients that anticipate removal of the gall-bladder should be hospitalized and given a few days of medical treatment with biliary drainage immediately before the operation.

Colon Bacillus Vaccine, Gonococcus Serum and Gonococcus Vaccine Omitted from N. N. R.—The Council on Pharmacy and Chemistry reports that all colon bacillus vaccines, gonococcus serums and gonococcus vaccines have been omitted from New and Nonofficial Remedies. The Council took this action because an examination of the existing evidence goes to show that these preparations are not of therapeutic value.—*Jour. A. M. A.*, Jan. 17, 1925.

TETANY FOLLOWING ABDOMINAL OPERATIONS.*

BY

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Postoperative tetany has for many years, been known to follow operations upon the thyroid gland in which the parathyroids have been injured to the extent of seriously impairing their function. Thus, this form of tetany became accepted as the result of insufficient parathyroid function. This solution, however, fails to satisfactorily account for the tetany which develops after surgical operations upon parts of the body remote from the parathyroid glands. Such cases do occur and with a telling effect upon the mortality rate. W. P. Healy has reported 7 cases following abdominal operations.

Tetany may be described as a hyperexcitability of the nervous system characterized by certain tonic muscular spasms. It does not affect all of the muscles but shows a tendency to be elective in its localization. When it involves the extremeties, the patient lies with the elbows and wrists flexed, the hands being held with the metacarpo-phalangeal joints flexed and the phalangeal joints extended. The thumb is flexed and tightly adducted into the palm. The index and second finger are held rather tightly together, and the two outer fingers are separated. This position has become generally known as the "obstetrical hand." The muscles maintaining this position are in a state of tonic contraction which may be overcome by very light effort on the part of the examiner; the contraction returns, however, as soon as the opposition to the muscles is removed. The lower extremities do not show such a characteristic picture. The knees may be held in flexion or extension. The feet may be extended and supinated in varying degree, and the toes flexed. The upper extremities usually develop this condition before the lower and when both are involved, the spasm is usually more marked in the upper. Unilateral involvement may occur, but typically the spasms are bilateral and of equal degree on the two sides.

Pain is felt in the regions affected by the muscular spasms. There is generally a rise of temperature of varying degree and the pulse is accelerated. Slight arrhythmia is more characteristic than a change in pulse rate, which may not be altered. The respiratory rate is moderately increased, with a definitely diminished amplitude. Evidence of air hunger is entirely absent. The re-

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flexes (muscle-jerks) are slightly increased with a lessening of the extent of movement due to the tonic contractions. The patient's mentality is not affected, as a rule.

Other clinical manifestations characteristic of tetany are: (1) Trousseau's sign, the induction of the typical carpal spasm by firm continuouus pressure over the large nerves in the arm; (2) Choostek's sign, slight spasm of the facial muscles elicited by tapping over the facial nerve, and (3) Erb's signs, alteration in the reaction of the muscles to electrical stimulation, the response to the galvanic current becoming the strongest.

Chemical examination of the blood shows a great increase in the CO^2 carrying capacity of the blood, an increase in the urea and a decrease in the chlorids. In most cases, there is also a diminution in the calcium content.

The picture just described is the frank, easily recognized condition which is appropriately called manifest tetany. Less typical and much more confusing are the varying modifications of this picture which may be considered latent tetany. Likewise, when tetany affects visceral muscles such as those of the gastro-intestinal tract or cardio-vascular system, the symptoms are much more obscure, and hence may not be recognized early enough for appropriate treatment to be instituted. Tetany affecting the stomach and duodenum has been thought to be the underlying cause of acute dilatation of these organs, and the various forms of non-mechanical postoperative ileus may have their explanation in tetany interfering with intestinal peristalsis.

The diagnosis of a frankly developed case of manifest tetany should be made with no difficulty, for the clinical picture is typical. Tetanus differs from it in the presence of trismus and clonic muscular spasms. Cerebro-spinal meningitis is differentiated by rigidity of the neck muscles, Kernig's sign, and by an examination of the spinal fluid.

Chorea presents a picture of muscular spasms of a less continuous type and free from pain. Encephalitis in its varying atypical forms does not give the typical signs of Trousseau, Choostek and Erb. Hysteria is often difficult to eliminate in the diagnosis; here the patient's previous history may be of some help. And finally, if the diagnosis is still in doubt, a chemical examination of the blood may show the typical findings detailed above. Indeed, in the obscure forms of tetany, this examination may be the sheet anchor of the diagnosis. Hence it should always be used early in the attempted solution of the problem. Here we have, just as in post-operative ileus, a condition which yields promptly to treatment, if recognized early, but if allowed to go too long, rapidly progresses to a fatal issue. The following cases are illustrative:

CASE REPORTS.

Case No. 1.—Mrs. H. R., aged 40, married, was operated upon after three years of irregularly recurring attacks of gall-bladder disease. A cholecystectomy was performed with no unusual operative difficulties and the patient suffered no shock. The anesthetic used was a combination of novocaine with nitrous oxide and oxygen. The first 8 hours of convalescence showed no untoward symptoms, but during the night the patient became very restless and slightly excitable. She had no pain, but could not sleep. Nausea and vomiting were practically absent.

Twenty-four hours after operation, the patient presented the typical picture of tetany with diagnostic signs. The spasms affected both arms and, to a lesser degree, the lower extremities. The temperature was 102° F., the pulse 96, strong and regular. The patient's mentality was clear and she complained of nothing except being "extremely nervous." Appropriate doses of morphine failed to relieve this excitability or to produce sleep. Her eyes were staring even to the point of a moderate exophthalmos and her pupils were contracted and equal. Her respiration was only slightly accelerated, but shallow. There were no signs of air-hunger. There was practically no distension of the abdomen and peristaltic sounds were audible. The urinary excretion was normal in amount and character at first, but it became bloody a few hours before death of the patient.

After the subcutaneous use of large amounts of calcium lactate, the carpopedal spasms relaxed completely, but the patient progressed toward a fatal outcome near the end of the second day following the operation.

Studying this case in retrospect, there was nothing in the patient's past history either recent or remote to indicate any tendency toward hyperexcitability of the nervous system. The preoperative preparation had consisted of the usual alkali in moderate doses, with an appropriate amount of digitalis and a light laxative. Purgation had not been excessive. During the first day after the operation the patient received too much sodium bicarbonate through a continuous Murphy drip enema, the nurse having prepared the solution with 5 per cent glucose and 5 per cent soda instead of 2 per cent soda. This point is to be emphasized in this case because excessive alkali may have been the exciting factor in the etiology of tetany in this case. A feature worthy of note is that while calcium lactate relieved the muscular spasms, it failed to overcome the underlying pathologic process which ultimately caused death.

Case No. 2.—Miss L. V., aged 26 years, was operated upon for a chronic pelvic condition which had been giving moderate symptoms for about 5 years. The operation consisted of removal of the right tube and ovary and the appendix, under ether anesthesia. The patient left the operating room in only fair condition; her blood-pressure being systolic 96, diastolic 68. (At the beginning of the operation, it had been, systolic 110, diastolic 80). Twenty-four hours after the operation, the patient's temperature reached 104° F. The pulse was very rapid, and weak—140 to 160 and above. Her lips were of good color, the respiratory rate normal, and there was no rapid breathing or air-hunger. The patient was extremely nervous and apprehensive. Her upper extremities,

particularly the hands were held in the typical position of tetany. The abdomen was greatly distended. Urinary excretion was 18 oz. during the first 12 hours following operation, and it showed no abnormalities. During the following 12 hours, the output of urine fell to 3 1/2 oz. and examination revealed albumin, diacetic acid and fine and coarsely granular casts.

This patient was given calcium by rectum. Saline infusions and stimulants failed to support the patient and death ensued about 36 hours after operation. While there could be no doubt that this was a true tetany, the dilatation of the stomach appears to have been the dominating factor. In the first case where there was no dilatation of the stomach, and the circulatory system, as indicated by the pulse and blood-pressure, remained in excellent condition right up to the fatal issue. In this case, where there was marked gastric dilatation, the pulse became extremely rapid and the blood-pressure very low early in the course of the complication. That there must be some relationship between tetany and acute dilatation of the stomach will have to be admitted. Certainly this case is evidence in point.

It could not be proven that this patient had received more soda than was proper. However, her previous history showed that she had frequently had what her family called "nervous spells," during which the patient would have muscular spasms similar to tetany. She probably had what we must recognize as latent tetany, and hence it required much less to precipitate the actual manifest condition.

Case No. 3.—R. G., male, aged 7 years, a fairly robust little boy with a good previous history was operated upon for chronic appendicitis. He had had several definite acute attacks. Nitrous oxide, oxygen and novocaine were used for the anesthetic. There were no operative difficulties, but the child took the anesthetic poorly and cyanosis had to be combatted.

No postoperative complications during the first 12 hours developed, but 24 hours after operation the patient developed characteristic tetany. The carpopedal spasms with the typical tests were present.

The pulse was only slightly accelerated but irregular in volume. There was no distension of the abdomen and the urinary excretion was normal in character and amount. Early diagnosis, followed by the prompt institution of calcium therapy, brought about complete recovery in a few hours. This child had never had any form of convulsions and there was nothing in his history to suggest the existence of latent tetany.

Of the three cases here presented, two ended fatally; in Healy's seven cases, four died. It will therefore be seen that tetany may have a very discouraging prognosis. Such a serious condition has naturally called forth much work to determine its etiology and the mechanism by which it is produced. In order to properly understand the facts concerning tetany, which are in our possession and to be in a better position to direct treatment, the following theories of its etiology may be accepted as at least working hypotheses: (1) Disturbance of the equilibrium between the antagonistic cations in the blood and tissue fluids; especially between calcium and magnesium on the one hand against potassium and sodium on the other; (2) disturbance between the acid-base equilibrium; (3) intoxication from the intestinal tract—the amino-acids, guanidine, methylguanidine and dimethyl guanidine being the poisons blamed, and (4) hypo-parathyroidism, however produced.

We must grant that there is such a condition as latent tetany which may at any time become manifest. And Barker has called attention to the existence of the tetany diathesis with vasomotor, secretory, and trophic disturbances. During pregnancy, lactation and menstruation, as well as after excessive purgation or vomiting, the condition is unusually prone to develop. Hyperpnoea of sufficient extent to produce alkalosis may cause tetany. Renal insufficiency probably is a concomitant factor as stated by Tileston and Underhill. Whether it acts as a cause or is an effect is yet to be determined.

However poorly the etiology may be understood, the treatment of tetany is relatively simple, and if instituted early, it will prove efficacious in the majority of cases. The first word in the treatment is calcium, and if this word is spoken promptly and firmly, no further words may be necessary. Clinically, most cures follow an active attempt to supply whatever calcium deficiency may exist. Calcium may be given in the form of calcium lactate by mouth, by rectum or by hypodermoclysis, but the best and most lasting effects are obtained when it is given intravenously. Ten c.c. of a 5 per cent solution of calcium lactate may be given intravenously. Judd advises giving this in 100 c. c. normal saline solution. It is simpler and easier to give the 10 c. c. in the one syringe and if it is given slowly, no objections can be raised to the method. Theoretically, it is better to give the chloride than the lactate because it has a stronger acid value and the chlorin radicles help supply these elements which have been found by blood examination to be greatly diminished. Calcium chloride may be used intravenously, but not subcutaneously because it is irritating.

While waiting for the calcium to have its effect, magnesium may be used as an adjuvant; its sedative effect on the nervous system has been conclusively demonstrated and it may tide the patient over an emergency period. Magnesium sulphate may be used by hypodermoclysis, one and one-half grains per pound of body weight, the salt to be dissolved in sterile water to the strength of 10 per cent. It is to be remembered that magnesium is a cation just as is calcium, so it may have a specific effect in addition to its value as a sedative. Inasmuch as insufficient secretion from the parathyroids may cause

tetany, there can be no objection to giving parathyroid extract by mouth or hypodermatically. It is conceivable that this might have a good effect. However, it should be used with the calcium salt and not alone.

The finding of a diminished amount of chlorides in the blood, together with the fact that McCallum has shown that tetany could be produced by removing all of the HCl from the stomach, constitutes sufficient justification for giving chlorides in the form of hydrochloric acid. If the stomach is in a condition to pass the acid along into the intestinal tract so that free absorption can take place, this may be given by mouth. If not, a properly diluted solution may be given by rectum. The researches of Diagstedt and his associates show that tetany due to hypo-parathyroidism can be controlled by overcoming proteolytic decomposition in the intestinal tract. This is a strong indication to give glucose and lactose freely by mouth and by rectum. Whenever there is evidence of intestinal tetany or gastric tetany (that is, acute dilatation), appropriate lavage and postural treatment should be resorted to promptly.

When dealing with a condition which has as high a mortality as the one under discussion, every possible attempt should be made to prevent it, rather than waiting until the condition has actually developed. Such preventive treatment should include a careful query into the patient's past with a view to finding any tendency to tetany or latent tetany. Any form of convulsions or evidence of hyperexcitability of the nervous system should attract thoughtful attention. The preoperative use of calcium chloride in such cases might help prevent trouble after operation.

The routine use of soda, often too freely, before and after operation is to be condemned. Glucose with sufficient amounts of water is a better and safer agent to use to prevent or overcome acidosis and to support the nutritive processes for the first twenty-four hours after operation.

ABSTRACT OF DISCUSSION.

Dr. C. W. Flynn, Dallas: I appreciate very much Doctor Wilson's timely paper on this subject. I have no doubt but that many cases of tetany are overlooked or else diagnosis is delayed until proper treatment comes too late. I hope that Doctor Wilson will continue his interest in this subject and at a later date will present further studies and statistics which will throw more light upon the diagnosis and treatment of tetany following operation.

Dr. A. O. Singleton, Galveston: I have never seen a case of postoperative tetany, but very likely will at some future time. I will naturally be better prepared to treat the condition, after having heard this paper.

CANCER OF THE RECTUM AND RECTOSIGMOID.*

BY

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In the year 1921, 76,274 persons died of cancer in the United States; of this number, 3,029 died of cancer of the rectum (3.9 per cent). In other words, one out of every 25 cancer deaths was due to a rectal neoplasm.[1] It is interesting also to note the constant increase in the number of deaths from malignancy; the Tenth Census gave a proportion of 20.5 per 100,000 of living population for whites, and 5.8 for colored; according to the Fourteenth Census (1920), the death rate was 89.4 per 100,000 population in the white race and 50.4 in the colored.

The present contribution is based on a study of 37 cases of rectal cancer admitted to Baylor Hospital (Dallas) during the five-year period ending December 31, 1923, of which number 12 were under the care of the writer. In this group of cases, the growth occurred at the rectosigmoid juncture in 10, in the ampulla in 22, and in the anal canal in 5. As will be shown there were characteristic early symptoms for each of these locations, as Homans[2] demonstrated for cancer of the large bowel; gross bleeding and intermittent obstruction in the rectosigmoid cancer; chronic increasing constipation with occasional mild hemorrhage in the rectal cases, and pain in those in which the growth involved the anus. Our continued failure to impress the importance of early symptomatology upon patient and practitioner is demonstrated by the universal long duration of significant symptoms. In the same connection, it was noted that 14 patients reported treatment for hemorrhoids, often shortly before the diagnosis of the coincident cancer was made, evidencing that it has not been recognized in this vicinity that the presence of blood in the stool demands proctoscopic examination and a barium enema.

ETIOLOGY.

The youngest patients observed were 30 years of age; the oldest was 79. There were 4 patients in the fourth decade, 8 in the fifth decade, 9 in the sixth decade, 11 in the seventh, and 5 patients over 70 years old. Sixteen of the cases were males and 21 were females. One cannot but be impressed by the number of cases with a history of piles for years before the malignancy appeared,

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, May 1, 1924. From the Department of Surgery, Baylor Hospital.

1. Bulletin No. 152, U. S. Census Bureau, 1921.
2. Homans, J.: "Symptomatology of Carcinoma of the Large Intestine," Surg. Clin. of N. Amer., Vol. i, p. 739, June, 1921.

in many instances the patient yielding to the idea of medical attention only when cancer symptoms appeared. Uncomplicated hemorrhoids do not give pain. Two of these cases had fistulae; one had anal tags which underwent malignant degeneration and metastasized to the inguinal glands before the patient knew he had rectal pathology; one recorded the previous removal of a "growth," presumably thought benign, and two had anal polypi, the bases of which were found to be malignant.

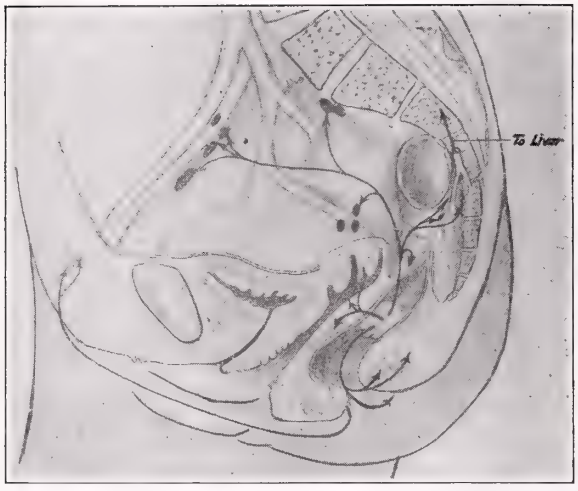

FIG. 1.—Diagram showing Routes of Extension and Metastasis of Rectal Cancer. The downward, lateral, and upward zones of extension described by Miles; route of inguinal metastasis in anal growth, and the venous route to liver.—Dr. C. L. Martin.

Perhaps the most interesting thing noted was the rarity of rectal cancer in the black. While the free dispensaries of Baylor Medical School, attended largely by negroes, are operated in conjunction with the hospital, only one case of negro rectal malignancy (specimen not obtained) was seen. As before cited, the death rate from general cancer in the race has increased to 50.4 per 100,000 living population,[1] but it is interesting to observe the continued comparative racial immunity of the rectum to malignancy, in spite of the frequency of stricture[3] and other fibroplastic rectal pathology in the race.[4] Royster[5] records no cases of rectal cancer observed in 15 years' work at St. Agnes Hospital for colored, and recently in a personal communication, states that he recalls only one such case in his experience.

Two microscopic diagnoses were recorded (Table I), both being adenocarcinoma. In addition to the presenting symptoms noted, 6 cases had rectal hemorrhage, two had abdominal pain (sigmoid impaction), and two noted excessive mucus. The constipation was almost universally interrupted by attacks of obstruction, which were relieved by excessive catharsis. Three of the inoperable cases, including the one alive after 14 months, were radiated. It is interesting to note that of the three operable cases, two are living. Five-year cures cannot, of course, be reported for any of this recent group.

FIG. 2—Photomicrograph. Adenocarcinoma-destruens, showing malignant infiltration of rectal muscle. (Writer's case.)

TABLE I.—CANCER OF THE RECTOSIGMOID JUNCTURE.

Case No.	Chief Symptom	Duration	Condition	Treatment	Results
1	Constipation	12 months	Operable	2nd Stage Kraske	Alive after 4 yrs. 2 mos.
2	Diarrhea	24 months	Operable	Abdomino-perineal	Alive after 3 yrs. 3 mos.
3	Constipation	8 months	Inoperable	Colostomy	Not followed.
4	Hemorrhage	12 months	Inoperable	Colostomy	Not followed.
5	Periodic Constipation	24 months	Inoperable	Colostomy	Died in 6 mos.
6	Constipation	12 months	Inoperable	Colostomy	Died in 2 weeks.
7	Periodic Constipation	.....	Inoperable	.....	Died in 10 days.
8	Obstruction	12 months	Inoperable	.....	Died in 12 hrs. (Perforated).
9	Periodic Constipation	12 months	Operable	Micilitz	Died in 48 hrs.
10	Obstruction (Periodic)	12 months	Inoperable	Colostomy	Alive after 14 mos.

Mayo[6] has shown how the percentage of five-year cures at the Mayo Clinic has been raised from 13 to 27 per cent by "pushing

3. Rosser, Curtice: "Stricture of the Rectum," Texas State Jour. of Med., Vol. xix, p. 508, 1924.
4. Rosser, Curtice: "Proctologic Peculiarities of the Negro—The Fibroplastic Diathesis," Am. Jour. of Surg., November 1, 1923.
5. Royster, H. A.: "Review of Operations at St. Agnew Hospital," Jour. of Natl. Med. Assn., Vol. vi, p. 221, 1914.
6. Mayo, W. J.: "Mortality and End Results in Surgery," Surg., Gyn. and Obst., Vol. xxxii, p. 97, 1921.

the operative frontier" up to 71.8 per cent of all cases of cancer of the rectum or colon admitted, instead of the earlier 25 out of every 100 judged to be operable. In other words, increasing boldness in the choice of operative cases, while raising the immediate mortality, also raises the number of final cures. The average duration of symptoms shown above (14 months) would indicate that earlier diagnosis must accompany more radical surgery to obtain the desired objective.

The following history serves to illustrate the tendency to spread, by direct extension, the late glandular involvement, and the possibility of operability months after origin of the growth.

FIG. 3.—Annular Adenocarcinoma of Rectum in Female, Two Years Duration, Operable. (Writer's case.)
(a) External appearance, showing opening of fistula, which masked annular malignancy just above anal canal.
(b) Gross specimen removed at operation.
(c) External appearance eight weeks after Kraske operation, showing new anal opening, with operative scar below.

CASE REPORT.

Case No. 1.—The patient was a white female, 67 years of age, admitted to the hospital on December 14, 1922, with a history of intermittent obstruction, constipation, and passage of blood, pus and mucus, for over two years. (Nine months previously she had refused treatment, after a diagnosis of cancer.) Upon entrance she was found to have an obstruction, with general peritonitis and sepsis. She died without intervention, in twelve hours. *Autopsy* (Prof. George Caldwell) disclosed a scirrous annular carcinoma of the rectosigmoid, with perforation of sigmoid, above the obstruction, and with perforation of the ileum where the small gut had become adherent to the malignant mass. No glandular involvement or visceral metastasis was present. In other words, the case was operable up to the time of perforation.

Ten microscopic diagnoses were recorded from this group (Table II); 3 were adenocarcinoma, 3 adenocarcinoma destruens, 1 adenocarcinoma (annular), 1 adenocarcinoma (protuberant), 1 tubular carcinoma, and 1 papillary tubular carcinoma. Of the 18 cases in which full histories were obtained, 13 (72 per cent) recorded constipation and 5 (28 per cent) cancer diarrhea. Hemorrhage was present in 72 per cent; pain occurred as a late symptom in 28 per cent. Ribbon stools were noted in only 2 cases, one a low annular growth, the other apparently due to sphincteric spasm. The duration of symptoms for this group was extremely long—no "average

TABLE II.—CANCER OF THE AMPULLA.

Case No.	Chief Symptom	Duration	Condition	Treatment	Results
1	No record	No record	Inoperable	Cautery	Not followed.
2	Constipation; Pain	Indefinite	Operable	Cautery	Not followed.
3	No record	No record	Inoperable	None	Not followed.
4	Diarrhea, wt. loss	3 years	Operable (?)	1st Stage Kraske	Died in 13 mos.
5	Constipation	.....	Inoperable	Colostomy	Died in 3 mos.
6	No record	Indefinite	Inoperable	Cautery	Died in 12 mos.
7	Diarrhea	Indefinite	Inoperable	Radium	Died in 13 mos.
8	Bloody Diarrhea	8 months	Inoperable	Percy Cautery Radium	Not followed.
9	Hemorrhage	4 years	Inoperable	Cautery	Died in 2 wks.
10	Constipation, wt. loss	6 months	Inoperable	Cautery	Died in 6 mos.
11	Diarrhea	Indefinite	Operable	1st Stage Kraske	Alive after 2 yrs. 3 mos.
12	Constipation	2 years	Inoperable	Colostomy	Died in 14 mos.
13	Bloody Diarrhea	12 months	Inoperable	Colostomy	Died in 1 week.
14	Constipation	12 months	Inoperable	Radium-X-ray	Alive after 15 mos.
15	Constipation	4 yrs. (previous Kras.)	Operable	Colostomy-Cautery	Not followed.
16	No record	Indefinite	Operable	(Perineal Excision Colostomy)	Not followed.
17	Constipation	Indefinite	Inoperable	Colostomy-X-ray-Radium	Alive after 9 mos.
18	Constipation	.....	Inoperable	Colostomy	Died in 6 days.
19	Const., Ribbon Stools	24 months	Operable	Kraske	Alive after 9 mos.
20	Hemorrhage	24 months	Inoperable	Colostomy-X-ray	Alive after 8 mos.
21	Const., wt. loss	6 months	Operable (?)	Kraske	Died in 5 mos.
22	Const., Ribbon Stools	12 months	Operable	Kraske	Alive after 6 mos.

duration" can be given, as the onset is insidious, often blending with the symptoms of previous rectal pathology. Twelve cases were radiated by Dr. C. L. Martin; in 3, radium was used alone, in 5 in conjunction with cautery excision, in 4 following colostomy, and in one case following a Kraske operation.

The operability in this group is also low, 24 per cent of the 22 cases. Of these 8 cases, 3 have not been followed, 3 are living, and 2

3. In considering the operation plus radium group, he found the highest percentage of well patients (17.5 per cent), and noted that the results of the various operative methods were similar; 50.5 per cent were improved; and 60 per cent of these lived 18 months or longer. Of this entire group, when admitted, 8.6 per cent were recurrent and hopeless, 27.5 per cent recurrent and extensive.

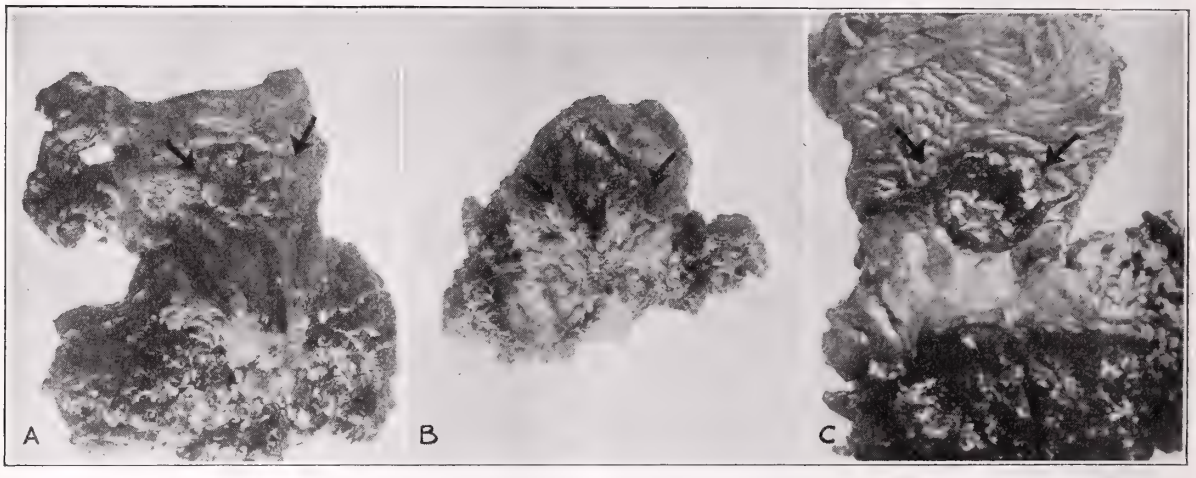

FIG. 4.—Gross specimens removed from three of writer's cases, all adenocarcinomas.

(both of whom had weight loss) are dead. Of the 14 inoperable cases, 3 could not be followed, 8 are dead, and 3 are alive at periods of 15, 9 and 8 months, respectively. Two of these latter patients had colostomy plus radiation, the other *x*-ray alone.

Kelly[7] has recently recorded his results for a ten-year period with radium, colostomy

Kelly calls attention to the high percentage of palliative cases secured by radiating an inoperable tumor down to operable size and then removing it.

The following history illustrates the difficulty in determining the date of the onset because of the insidious development of symptoms.

TABLE III.—CANCER OF THE ANAL CANAL.

Case No.	Chief Symptom	Duration	Condition	Treatment	Results
1	Blood	3 months	Inoperable	Cautery	Not followed.
2	Pain	12 months	Operable	Refused	Died in 6 mos.
3	Blood; pain late	12 months	Operable	Complete Cautery Excision—Radiation	Living after 9 mos.
4	Inguinal Mass	Unknown	Inoperable	Partial Excision—Radiation	Living after 12 mos.
5	Pain; Polyp.	24 months	Operable after radiation	Colostomy plus Kraske	Living after 6 mos.

plus radium, and radical surgery plus radium as follows:

1. Of all the cases treated with radium alone, there is an actual cure of 8.5 per cent, with a palliation of 65.9 per cent, 37 per cent of which lived over 18 months.

2. The radium-colostomy group gave the lowest percentage of cures (6.3 per cent), but the highest percentage of palliation (68.7 per cent). Of the palliated cases, 45.5 per cent lived 18 months or longer.

7. Kelly, H. A., and Ward, G. E.: "Clinical Study of Radium Therapy in Carcinoma of the Rectum," Surg., Gyn. and Obst., Vol. xxxvii, p. 626, 1923.

CASE REPORT.

Case No. 2.—A well nourished while male farmer of 42 years of age, was first admitted to Baylor Hospital in November, 1922. His only complaint was increasing constipation (patient had "always been constipated"), with a history of acute obstruction two weeks before, relieved by catharsis. Pain, bleeding and weight loss were not present. Proctoscopic examination revealed a fixed pelvic mass the size of a cocoanut, completely surrounding and narrowing the rectum to one-half inch diameter. The sigmoid was impacted throughout, with a narrow channel for daily semi-soft movements. Later, colostomy plus radiation relieved the patient's obstruction and he gradually gained 30 pounds. He is alive, without constitutional symptoms, although the mass has not noticeably decreased, and in spite of the fact that

the malignancy has recently (16 months after the patient was first seen) metastasized by the way of the prostate to the inguinal glands.

The pathological diagnoses recorded in the cases in Table III were: epidermoid carcinoma, 1; adenocarcinoma of mucocutaneous junction, 1; squamous-cell carcinoma, 1, and colloid carcinoma, 2. The two latter apparently originated in rectal glands and involved the anal canal secondarily. Pain was absent in 1, unrecorded in 1, and present in 3. In the first case (pain absent) the cancer originated in external tags. Bleeding and constipation each occurred in 80 per cent. In spite of pain, the average duration of symptoms was 13.7 months. The three living cases received a combination of radiation and surgery (radical removal in one).

Of the entire series, 23 (62 per cent) were classed as inoperable, and 14 (38 per cent) as operable. Of the 38 cases, 9 were not followed, 12 (32 per cent) are living, and 16 (43.7 per cent) are known to be dead. Of the radically operated, 7 (54 per cent) are known to be alive; 3 could not be followed.

FIG. 5.—Plates after barium enemas.
(a) Rectosigmoid obstruction from annular malignancy at this point.
(b) Rectal obstruction from inoperable malignancy of ampulla. (Writer's case.)

CONCLUSIONS.

1. Beyond the statement that we are committed to the joint use of radiation and surgery, conclusions are not justified in connection with a small and recent series.

2. Our diagnoses are being made too late, and our "operative frontier" has not been sufficiently advanced.

ABSTRACT OF DISCUSSION.

Dr. C. L. Martin, Dallas: I deeply appreciate being asked to discuss the radiological side of the therapy of rectal cancer before this section. The ultimate results obtained by either surgery or radiology employed singly, have certainly been far from brilliant. However, it is my feeling that the judicious combination of the two methods of attack has definitely improved the patient's outlook.

It is unfortunately true that adenocarcinoma of the intestinal canal requires huge doses of irradiation to produce retrogression, whereas the normal mucous membrane is very sensitive to irradiation and is easily injured by it. In using radium it is necessary to take great care to protect the normal structures while administering large doses to the tumor. This is done by planting needles or emanation tubes deep in the tumor or by using lead shields and packs to hold the mucous membrane away from larger quantities of radium in capsules placed against the growth. The problem of efficient safe irradiation is often difficult and sometimes impossible of solution. When penetrating x-rays are used, the dose delivered to the rectum must not be large enough to injure the normal mucosa. Such a dose is usually too small to cure adenocarcinoma, but often relieves symptoms.

We like to divide our cases into those which are operable, border line, and inoperable. In the first class the tumor is small and movable and no external evidence of metastases can be made out. We feel that such patients should first have an exploratory operation, during which the liver is examined and a colostomy done. At a subsequent operation the tumor and several inches of the rectum with the surrounding fat should be removed. If the liver shows involvement as it sometimes does even in early cases, deep x-ray therapy should be applied to it as a palliative measure. The pelvis may also be rayed, although this is probably not always necessary.

The border line cases present larger tumors which are partially fixed in the pelvis and have begun to metastasize. In such patients an exploratory operation reveals the extent of metastasis and should be followed by a colostomy. Intensive radium and x-ray therapy should follow this procedure. In some instances such cases have retrogressed to an operable stage. Death is often the ultimate outcome, but symptoms are relieved over a long period of time. In the advanced inoperable cases, an early colostomy renders intensive irradiation much easier and should be done before either x-ray or radium therapy is begun. Cure is practically impossible, but pain, hemorrhage, and discharge can often be done away with for a considerable period of time.

Dr. J. E. Thompson, Galveston: I would like to ask Dr. Rosser about the preliminary treatment relative to colostomy.

Dr. Rosser (closing): Regarding Dr. Thompson's question, the radical procedure which offers most chance of cure, probably combines operation from below and colostomy. Relative to restoration of the bowel, I do not think it has to be restored. A permanent colostomy is not such a bugbear, and many leading operators find that when the patient's bowels become habituated, they accustom themselves to this condition fairly well. This is not the ideal, but probably offers the patient the best chance in the majority of extreme cases.

RETROVERSION.*

BY

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ANATOMIC CONSIDERATIONS.

The anatomic basis for retroversion is not well understood, inasmuch as the structure or structures which hold the uterus in position have not been positively identified. It is quite generally accepted that the round and utero-sacral ligaments are not the essential supporting structures, and that the uterus is maintained in position chiefly by the transverse or cardinal ligament of the pelvis. Certainly the round ligaments are not the supporting structures, because, even if they did maintain a state of tonic contraction, their relaxation under anesthesia would permit of the easy retrodisplacement of the uterus, which is not the case. I have had the opportunity, in three cases, of seeing the round ligaments through incisions made under local anesthesia, and in these instances the round ligaments appeared as lax as under ether or spinal anesthesia. The uterosacral ligaments, likewise, do not appear more tense in patients with normally posed uteri than in those with retroversion; and the direction of traction of these ligaments (if there be any traction) is ordinarily in a direction roughly parallel to the long axis of the uterus and not at an angle sufficient to draw the cervix backward.

Moreover, forcible movement of the uterus backward and forward produces no appreciable strain on either the round or the uterosacral ligaments. On attempting to retrovert a normally posed uterus, especially in virgins (in whom the relaxation and stretching of the supporting structures incident to childbearing has not occurred), it will be noticed that after reaching a certain point resistance to the turning movement is encountered, and that this resistance increases until retroflexion occurs, indicating that the area of resistance is below the point of flexion, *i. e.*, in the supravaginal cervix. The only structures firmly attached in this area are the walls of the vagina, which are too lax to exert any tractive influence; and the very indefinite structure, known as the transverse or cardinal ligament of the pelvis, which runs across the pelvis from side to side in and below the bases of the broad ligaments. It is difficult to demonstrate as a definite structure by dissection, but its presence becomes very apparent when one divides the tissues surrounding and lying inferior to the uterine vessels in the course of a complete hysterectomy. These tissues become denser as one goes downward with the scissors until the level of the vault of the vagina is reached, when the density decreases and fades off into the looser paravaginal tissues. In retroversion, especially of the acquired variety, this structure must necessarily undergo considerable torsion; but the demonstration of this torsion by dissection is unsatisfactory.

ETIOLOGY.

The percentage of cases of retroversion of congenital origin is much greater than was previously accepted. The writer believes that a considerable number of cases do not present congenital retroversion, but have a congenital anomaly of the structures which maintain the uterus in normal position. Later in life, this anomaly facilitates the occurrence of retroversion from causes which would not be sufficient to produce retroversion in normally supported uteri. This is merely an unsupported theory which, if it could be accepted, would make the mechanism of intermittent retroversion, traumatic retroversion, and other obscure points more easily understood.

Postpartal conditions constitute the classical and most easily understood factors in the production of retroversion; here are found relaxation and stretching of the supporting structures, increase in weight of the uterus, and the patient lying a good deal of the time flat upon her back. If involution be delayed the opportunity for the occurrence of retroversion becomes greater.

Neoplasms of the corpus uteri and massive adnexitis tend to produce retroversion by pulling the uterus backward. Neoplasms of the anterior uterine wall, or lying anterior to the uterus, may push the uterus into retroversion. The contraction of adhesions between the uterus and fixed structures posterior to it may pull the uterus into retroversion.

The effects of dress, posture, occupation, and direct or indirect trauma, must all be taken into account. After the menopause the supporting structures of the uterus share in the general atrophic process, and this permits the physiologic retroversion which is al-

*Read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, San Antonio, May 1, 1924.

most universal in women a few years past the climacteric.

PATHOLOGY.

From the observation of cases which have come under my care, I have come to the conclusion that the basic pathologic change resulting from or accompanying retroversion, is congestion, and that all the other tissue changes incident to uncomplicated retroversion arise from this circulatory condition. In seeking for the anatomic basis for this congestion we encounter difficulties. The ovarian veins, swinging as they do close to or in the free border of the broad and infundibulopelvic ligaments, are not twisted on themselves to a degree sufficient to produce a mechanical obstacle to venous drainage. Distention of these veins, which is usual, does not always occur and when it does occur the distention is apt to continue up into the retroperitoneal portion of the ovarian veins, above the pelvic brim and above the point where torsion might be expected to cause obstruction. Incidentally, the degree of distention of these veins is not always in proportion to the severity of the symptoms of congestion. Just what the condition of the uterine veins may be is not so easily determined on account of their buried position. From this point of view, it is therefore difficult to understand why cases of congenital retroversion, in which the anatomic status of the veins may be presumed to have conformed to the abnormal position of the uterus and broad ligaments during the process of development, should present the same degree of congestion as the cases of acquired retroversion in which the deviation from the normal is established with comparative quickness, giving the veins less opportunity for adaptation.

The pathologic change throughout the internal genitalia resulting from this primary congestion is in the nature of a chronic, low-grade, non-infected fibrosis.

The cervix is probably less affected than any of the other organs except the tubes. At first there is frequently a glandular hyperactivity, evidenced by the excessive secretion of mucus; and this passes into a chronic endocervicitis and ultimately, a certain degree of cervicitis with tissue infiltration and fibrosis. Erosion may occur.

The changes in the uterus proper are of greater importance. Due to the congestion there is a progressive hypertrophic change in the endometrium with menorrhagia. Later, there is a regressive change in the endometrium with fibrosis of its vessels and of the vessels and tissues of the uterine wall. These factors operate during menstruation to prevent the normal process of hemostasis accomplished by contraction of the uterine vessels and their compression by the uterine musculature, so that the menorrhagia is increased in some cases to a degree which makes it intractable and practically continuous. The congestion of the uterine wall leads to a certain degree of hypertrophy with increase in weight, which tends to increase the retroversion; and the increased retroversion increases the congestion, producing a sort of vicious circle. Later, in uncorrected cases, there is the familiar picture of replacement fibrosis: formation of new fibrous tissue, and atrophy of normal tissues through their compression by the contracting fibrous tissue and through alteration in the blood supply; terminating in the virtual replacement of the myometrium by fibrous tissue.

The pathologic changes occurring in the ovaries, incident to the congestion, are not so generally recognized; and yet, to the author, they constitute the most important feature of the clinical picture, on account of the impossibility of repairing the damage done to these organs in the advanced stages of the fibrotic process. With retroversion there is a distinct tendency to prolapse of the ovaries, either intrinsic or incidental to the retroversion. This aggravates the congestion and hence the fibrotic processes which follow the same course as in the uterus. Contraction of the fibrous tissue tends to lessen the functional activity of the secretory cells both by direct pressure and by interference with the blood supply, thus producing a condition of ovarian hypofunction, with irregular and often scanty menstruation. There is also interference with the normal migration and rupture of the follicles, which results in partial or complete sterility. The ovarian veins and the veins of the pampiniform plexus are quite subject to varicosity in cases of retroversion.

CLINICAL VARIETIES.

Retroversion may be classified from three standpoints: Anatomic, etiologic and pathologic.

Anatomically, there are 3 degrees of retroversion, which may best be recognized by the direction of the long axis of the cervix, which points, in the first degree, to the promontory of the sacrum; in the third degree, to the sacro-coccygeal joint; and in the second degree, to any point between these two.

Etiologically, there are congenital and acquired retroversions, the latter arising from puerperal, inflammatory, neoplastic, climacteric, traumatic, or indefinite causes.

Pathologically, the classification may be made from the stage of progress of the con-

gestive-fibrotic process: First, congestion; second, fibrosis.

SYMPTOMATOLOGY.

Sterility and the tendency to abortion will be discussed separately. There may be absolutely no symptoms; and associated symptoms are often in no way due to the existence of the retroversion. Symptoms arising from changes in the cervix are often absent. When present, they consist chiefly of mucous discharge, and later, sacro-lumbar pain of an aching character.

Symptoms arising from changes in the uterus and endometrium are: (1) Pelvic pressure and aching pain in the sacrolumbar region, aggravated by the erect posture, by menstruation, and by sexual relations; (2) dysmenorrhea of the congestive or obstructive type; (3) dyspareunia; (4) progressive menorrhagia. This latter condition may exist for a time, to be counteracted by the ovarian hypofunction if the latter becomes predominant.

Symptoms arising from changes in the ovary are: (1) Symptoms of hyperfunction during the congestive stage; a tendency to menorrhagia and to decreased interval; (2) symptoms of hypofunction, which may exist from the beginning of sexual life, when the condition is probably developmental, or may occur rather late in the course of the condition, usually after 10 or 15 years of menstrual life, and consist of irregular menstruation with increase of the interval and progressive oligomenorrhea. The latter may not be apparent on account of the tendency to menorrhagia if the changes in the uterus predominate; (3) bilateral menstrual pain; (4) pain over the anterior surface of the thigh; (5) nausea, and (6) early menopause.

Symptoms arising from pressure on and congestion in adjacent viscera are: (1) In the bladder, irritability, frequency, urgency, ardor urinae, nocturia, etc.; (2) in the rectum, constipation, hemorrhoids, proctitis. Symptoms of obscure origin, variously ascribed to toxic or reflex conditions are: occipitovertical headache, vertigo, psychoses, neuroses, digestive disturbances, visual disturbances, etc.

From the patients' point of view the most important symptoms are the distress and disability resultant from the pain and dysmenorrhea, and later, from the secondary anemia due to menorrhagia and the toxic (?) status. From a broader point of view the most important symptoms are sterility and the tendency to abortion.

Sterility may be due to changes in any of the internal genitalia except the tubes, which are not greatly affected by retroversion. Endocervicitis, with altered secretion, is probably the chief cause of sterility from changes in the cervix. Various authors mention a mechanical obstacle to insemination due to the fact that the cervix does not remain immersed in the seminal pool in the posterior fornix after intercourse. There seems to be a reduced ability on the part of the endometrium to furnish a suitable decidual site for the implantation of the ovum. Conditions in the myometrium probably have little effect directly on fertility.

The writer believes that conditions existent in the ovary during the later stages of inflammatory change, tend to produce sterility much more frequently than is generally recognized. In the first place, there is conceivably a reduction in the functional strength of the corpus luteum, from compression and interference with its blood supply, which, if we may believe the theory most generally accepted at present, will in turn affect adversely the decidual reaction in the endometrium. In the second place, the resistance to migration and rupture of the folicle on account of increase in the fibrous tissue of the ovary may either wholly prevent rupture, or lead to such an increase in the internal pressure of the follicle as to cause the death of the ovum before rupture of the follicle.

Abortion is most often brought about by incarceration of the uterus, with the mechanical obstacle to its expansion and the resultant increase in internal pressure to the point of setting up uterine contractions and the expulsion of the product of conception; this occurs usually during the fourth month. Possibly, also, a certain number of fertilized ova become implanted on the abnormal decidua, to survive only for a short time and then perish from insufficient or unsuitable supply of nutrient material. Such a theory would account for the not infrequently seen cases of abortion in the first few weeks when incarceration would not be a factor. In advanced fibrosis of the uterus, if conception occurred, there might be a decrease in the capacity for hypertrophy of the myometrium which would prevent the uterus from keeping pace with the needs of the growing product of conception.

TREATMENT.

The non-operative treatment of retroversion, which for a time fell into discredit, has a distinct and very useful place. Such treatment will be found ineffective in most cases of congenital retroversion and in many cases of acquired retroversion of long standing. In its simplest form, non-operative treatment consists in reposition of the uterus followed by postural treatment (knee chest position,

elephant walk, avoidance of the dorsal recumbent position, etc.). These measures may prove effective in many cases of retroversion from recent abortion or childbirth. Usually, however, the use of a supporting appliance will be found necessary; and of these the most generally applicable and least objectionable is the hard rubber Smith-Hodge pessary shaped to suit the individual case. Generally speaking, the writer has found the use of the pessary limited to the following four situations:

1. Puerperal retroversion, in which permanent correction can be secured in from 60 to 70 per cent of cases treated within six weeks after parturition, or after the occurrence of retroversion (which may not take place until some months postpartum); especially if the size and weight of the uterus be reduced by oxytocics.

2. To support the retroverted pregnant uterus until its increased size will prevent the recurrence of retroversion.

3. As a test of the relation of retroversion to obscure symptoms or to sterility. If the symptoms disappear while the uterus is held in position and recur with the recurrence of retroversion after removal of the pessary, operation may be undertaken in these cases with greater certainty of relief; and this experiment is less costly in every way than experimental laparotomy.

4. For the relief of symptoms during a period of postponement of operation—as in the case of a school teacher waiting for vacation, or in a patient suffering from some disease which contraindicates for a time anesthesia or operation.

The after care of the pessary consists only in a cleansing douche taken daily. Usually the pessary should be removed after three months, and if the retroversion recurs the choice made between operation and further pessary support.

To review the myriad operations devised for the correction of retroversion would be useless; the effectiveness of any such operation must be judged by:

(1) The degree of correction of the retroversion; (2) the permanency of this correction under the stress of normal life and child bearing; (3) the absence of undesirable anatomic conditions produced by the operation; (4) absence of bad effects upon pregnancy and labor, and (5) operative mortality and morbidity.

In the Department of Gynecology of the University of Texas the operation most frequently employed during the past fourteen years has been that of ventrosuspension by the technic of Dr. George H. Lee. This technic consists of the apposition by (usually) three sutures, of the *lower anterior* surface of the uterus to the anterior parietal peritoneum, and is accomplished by simply including in the first three stitches of the peritoneal closure of the laparotomy wound, a portion of the anterior uterine wall, *well below the fundus*. These stitches include about one-half the thickness of the uterine wall, and are, on an average, about one centimeter long and one-half centimeter apart. Some years ago, the writer suggested that the lowest stitch be placed just above the uterovesical fold, avoiding the active segment of the uterus and reducing or eliminating the opening below the point of suspension through which internal hernia might occur. By this procedure retroversion and prolapse are fully corrected. The permanency of the correction may be judged best by the fact that of 519 women in whom this operation has been performed at John Sealy Hospital from January, 1912, to December, 1923, only 3 returned for the correction of recurrent retroversion, and not over 6 (the exact number not being available) have been seen by members of the staff, with recurrence.

The operation certainly produces a most unanatomic state of affairs, the uterus lying wholly above the pelvic brim and apposed to the anterior abdominal wall. The possibility of hernia under the ventrosuspension band exists; but as yet such an accident has not been seen in this clinic, although there have been two cases of hernia through openings made by *round ligament* operations. The production of a long fibrous band by traction of the uterus has been seen in only 3 cases, the majority of those subsequently operated upon for other pathologic conditions showing a very slight pulling-out of the fibrous union, most of the required elongation having been brought about by the pulling-out of a bundle of tissue from the anterior uterine wall. This tissue presumably hypertrophies and involutes with the rest of the uterus, judging by its appearance in patients operated upon, after having borne children subsequent to ventrosuspension. As regards the effect of the operation upon pregnancy and labor, some time ago, Dr. Lee and the writer were able to collect from all sources 75 cases with 92 pregnancies, one woman having borne five children subsequent to ventrosuspension. The exact figures are not available now, but the incidence of abortion was much lower and the incidence of dystocia no greater than the average for women not operated upon, in the clinic and in private practice.

The operative mortality in these 519 ventrosuspensions was 3, the cause of death in one uncomplicated case being acute yellow atrophy of the liver; in another, gas bacillus

infection 1 month after operation; the other case being one of suppurating tubal pregnancy, dying of peritonitis. Exact figures on postoperative morbidity have not been compiled on account of lack of time; but it was the experience of Dr. Lee, shared by the writer, that there was greater and more prolonged pain after round ligament operations than after ventrosuspension.

PROGNOSIS.

The opportunity for permanent relief from pessary treatment is estimated at about 60 to 70 per cent in recent puerperal cases. In other cases, especially the congenital cases, correction is difficult and permanent relief improbable. Of 126 patients with recorded follow-up examinations treated by operation 105 reported relief of symptoms; 15, improvement, and 7, no relief; and, judging from private practice, this relief is quite permanent except as regards what is generally spoken of as "nervousness," which is often not directly due to the retroversion and hence not relieved permanently by its correction. The effect of correction on sterility varies with the stage of the process (especially as regards the ovaries) and with the degree and character of the complicating pathology. The writer does not recall a case in which sterility was relieved after definite symptoms of oophoritis with hypofunction had set in; whereas there has been a high percentage of relief of sterility in uncomplicated cases operated upon in the earlier stages of the pathologic process. Hence it is best, where sterility exists, especially if the woman is approaching or past the age of 25 years, not to wait too long before operating on account of the increasing danger of permanent sterility, presumably from ovarian pathology.

TABLE I.

CASES OF RETROVERSION IN THE JOHN SEALY HOSPITAL, FROM JANUARY, 1912, TO DECEMBER, 1923.

Total cases of retroversion		842
Correction not considered necessary or patients declined correction		106
Operation for complicating conditions corrected retroversion		21
Hysterectomies for complications		82
		209
Total cases requiring correction	633	
Reposition and pessary only	13	
Total cases operated upon for retroversion	620	
Ventrosuspensions (Lee technique)		519
Ventrofixations		8
Alexander Operation		6
Internal Alexander		37
Mayo		3
Gillian-Crossen-Ferguson		20
Baldy-Webster		6
Graves		1
Plication		13
"Round Ligament"		7

FOLLOW UP RECORD.

	Reported	2 Months to 1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	10 Years	Total
Well	68	8	5	7	3	5	2	6	1		105
Improved	10	2	2	....	....	1	....	....	....		15
Not improved	6	1	....	....	....	....	....	....	....		7

ABSTRACT OF DISCUSSION.

Dr. M. S. Seely, Dallas: Surgery is too often advocated for retroversion with only a moderate degree of prolapsus. Pessaries are usually adequate to give relief from this condition, and there is a possibility of cure by this method of correction. The pendulum must swing back. Dr. Cook allows too short a time for the condition to return to normal after the pessary is introduced. Retroversion is a chronic condition; these ligaments have been overstretched for months or years and will slowly regain their tone when the tension is taken off. It takes from 4 to 6 months on an average instead of three. I think, however, that one should be able to say in three months if he is going to get satisfactory results. Failure with the pessary is often due to early discouragement, and those who have tried them and failed will find that a misfit is most often the cause; the pessary must fit if you are to get results and have a comfortable patient—some cases require a specially molded pessary. If the doctor has but one or two pessaries he is not likely to get and maintain an adjustment of the uterus in many cases. The most likely mistake is to introduce one that is too large in the beginning. I have had some cases in which I used four pessaries of progressively larger size as the shrinkage in the ligaments occurred. I usually start with one that has shorter arms and is smaller than may be needed. Never introduce one that give pain in the beginning, or the patient will be discouraged and not coöperate further. Then in from 3 to 6 weeks introduce one of the larger size, but guard against too much tension on the posterior wall of the vagina.

If you fail to get results in a case, don't blame the method. Many of the women that are operated by various forms of suspension have returned to the doctor because of a return of symptoms, and he finds that the ligaments have elongated again and allowed the uterus to come down. This is very discouraging to the patient and she will usually go to some other doctor about it, for she feels that you have done the final thing you had at hand for her. If the condition has been corrected by pessary and it returns, she will come back to you for the pessary again, or may willingly submit to operation in hopes that the result will be more lasting.

Dr. Cooke (closing): I agree that this paper covers too much territory; and yet, I was unable to eliminate any part of it without altering altogether the title of the paper. As regards treatment with the pessary, I agree that 3 months is frequently too short a time in which to get permanent results in many cases. Indeed, the pessary may be worn for 6 months or a year if it is properly cared for, without injury to the patient.

As regards the fitting of the pessary, the method is simply that of introduction of different sized pessaries, beginning with the one which experience would tell you is the proper size. It is unusual that more than one pessary has to be tried out after one has become accustomed to their use. It is better to start with a pessary too small if there is any doubt, and to replace it with a larger one when it falls out or permits recurrence of the retroversion, than to use a pessary which is too large, causing discomfort to the patient, as the result of which she frequently

will become disgusted and decline to permit continuation of pessary treatment.

The operation which I have described as having been devised by Dr. Lee may or may not have been original with him. I have never seen it described anywhere. His original technique was the apposition of the anterior wall of the uterus to the anterior parietal peritoneum just below the fundus; and this was later modified, as noted in the paper, so that the point of attachment was made just above the utero-vesical fold of the peritoneum, bringing the new ligament into what probably represents during pregnancy the passive segment of the uterus. This tends to prevent still more effectively the formation of a ligament at a point which might interfere with the active segment of the uterus during pregnancy and with its contraction during labor.

HEALTH CONSERVATION AFTER FORTY.*

BY

WILLIAM M. BRUMBY, M. D.,
HOUSTON, TEXAS.

The span of life has been remarkably lengthened since 1880, by the prevention and control of acute diseases, largely diseases of infancy and childhood, through applied science. However, old age has by no means been deferred; in fact, the strenuous business life and sedentary habits are shortening the life of "the man of affairs." Professor Irving Fisher of Yale, says that it is his belief that, "The mortality after middle age is growing worse and the vitality of the people is, in all probability, deteriorating."

The incidence of heart disease, apoplexy, paralysis, Bright's disease and cancer have doubled in this same period since 1880. Degenerative diseases usually attacking those of from 60 to 70 years of age have been creeping down to the forties and fifties. Fifty-one per cent of the deaths occurring after 40 years of age are due to degenerative diseases and are preventable to a degree. Eighty per cent of the mortality from these organic diseases is postponable anywhere from a few days to many years by judicious treatment—often a matter of change of diet and of habits rather than medicine.

There is something radically wrong with the habits of our big business men, judging from the rapid increase among them of chronic maladies after 40. Multitudes of useful citizens of great constructive value to society have rapidly degenerated in their supposed physical prime and died without one single indication of disease. Although ruddy, robust, cheerful and never really sick in all his 40 or more years, yet his physical dynamo cannot carry the overload; the reserve is gone; the nervous strain too great. When a useful citizen crumples down and dies from 15 to 20 years before his time, it is something more than a great family misfortune, it is a civic loss—an inestimable loss to society.

Volumes have been written on the diseases common to middle life, but too little emphasis has been placed by our profession, upon disease tendencies having the most important bearing upon the length of life of the individual and upon the efficiency and well-being of old age. Cardio-vascular-renal disease has doubled in this same age period. Heart disease leads in the actual number of deaths, although gastro-intestional disturbances head the list of morbidity. Among mature lives, one-half of all fatal diseases are connected with the kidneys or the circulation. With advancing age, degenerative changes of the heart and kidneys are so frequently interlaced as to make it often impossible to draw the line where one ends and the other begins. We know that if we live long enough, a large majority of us will ultimately die from diseases of the heart, arteries, or kidneys—diseases that usually cause very little or no pain. The individual claims to be in perfect health until too late to remedy the condition.

Arteriosclerosis and chronic diseases of the arteries are looked upon as diseases peculiar to middle life because they are seldom seen under 40 years of age. Volumes are written upon their cause and effect, but the fact remains that the first manifestations must be sought if treatment is to be of any avail.

Tuberculosis once leading in causes of death, now takes third place due to agitation throughout the country, following the International Congress on Tuberculosis in Washington in 1908. I look back upon this work as the proudest period of my official life, for I was part of it. The Texas delegation "did themselves proud" in putting on the first anti-tuberculosis exhibit shown in the South.

A somewhat similar national movement for the prevention and relief of heart diseases is on the tapis. Here's hoping it may succeed one-tenth part as well as the tuberculosis congress, for to even stem the tide of these disorders would be a tremendous accomplishment!

Pneumonia is responsible for a large proportion of deaths at all ages, but being so frequently the cause of death in the aged, it has been called "the old man's friend." Other more chronic diseases of the lungs, not necessarily fatal, are often responsible for a state of semi-invalidism late in life.

Diseases of the gastro-intestional tract really come first of all. With advancing age, atrophy of the various glands of the body begins, the diminished secretion of the gastric juice lowers the digestive properties, and intestinal disturbances occur. The normal

*Read before the Section on State Medicine and Public Hygiene. State Medical Association of Texas, San Antonio, April 30, 1924.

protective agents are not sufficient to combat harmful influences, such as bacteria in fruit, vegetables and uncooked food, and an already lowered resistance allows the intestinal mucosa to become a fertile soil for propagating disease, even at remote points. Chronic excessive intestinal toxemia, in my opinion, accounts directly or indirectly for almost every ill that falls to the lot of the individual of advanced age, and is frequently associated with diseases of the heart, kidneys, liver, gall-bladder, etc.

Cancer occurs so much more frequently after the age of 40 that it is often spoken of as the "Cancer Age." An annual survey and comparisons with previous examinations, will usually reveal this disease long before the more easily recognized group symptoms develop.

The prevalence of diabetes increases with the age and the obesity of the patient. Like the degenerative diseases of advancing years, it is unfortunately a painless disease; here also, the earlier it is recognized, the better it can be treated.

Pyorrhoea and infected teeth are far more common after 40 and are usually associated with some constitutional disorder such as rheumatism, gout, Bright's disease or syphilis, and not one of purely local origin.

Fat is fatal after forty; light weight old persons live the longest. Carefully tabulated insurance statistics of a million lives prove that the greater the increase in weight after 40, the greater the increase in mortality, regardless of careful medical selection and the more recent the increase, the more positive the increased hazard. Just look around you; how many persons over 80 years of age do you know that are 20 per cent overweight?

Periodic health examinations are becoming more popular every year because the people are slowly awakening to the fact that many diseases begin so insidiously as to be otherwise unrecognized, and not because of any organized effort on the part of our profession to acquaint them with this fact until recently. Early recognition is essential if prevention or cure is expected in any form of the degenerative diseases of middle life and advanced age, the large majority of which may exist without the slightest consciousness of danger until too late to remedy them.

An effort is being made by the American Medical Asssociation to induce the physicians of this country to encourage periodic examinations of presumbably healthy persons, but they do not tell us how far to go along the lines of ethical advertising in order to acquaint the people with its advantages. Our State Medical Association is undertaking a campaign of education of the laity in an effort to awaken the gullible public to the contrast between the highly educated physician of today and the self-advertised chiropractor of usually limited educational advantages and no knowledge of scientific medicine, surgery, or anatomy of the human body. The U. S. Public Health Service is now conducting a health survey of the faculty and students of our universities and colleges throughout the country in order to interest our intelligent public in this commendable work.

Many of our most conservative insurance companies have realized the advantage of health conservation and have demonstrated its usefulness both in prolonging the life of their policy-holders and in increasing their revenues by the additional premiums paid in consequence. Our large manufacturing concerns make a careful and constant survey of their machinery at intervals in an effort to locate the wear and tear and prevent accidents. All business concerns "take stock" annually; why should not we learn early the condition of our vital forces when at our best in order that we also may watch the wear and tear of life, and know where the greatest demands are made in time to mend our weak spots.

Thousands of men and women, apparently in the prime of life, are becoming incapacitated or die ultimately from the insidious development of these degenerative tendencies. The economic loss to the nation mounts to a staggering sum. Is there a remedy? I answer that there is, and that the responsibility for carrying it out rests with the medical profession.

Organizations fostered by laymen have been operating for years, and through liberal use of paid advertising in the press and other publicity methods, have enlisted a large following. Some of these organizations employ physicians to make their examinations and they have been enabled to do considerable good; others have endeavored to operate without a medical examination and have succeeded in doing untold harm. However, as the idea grows other similar organizations will be formed, and whether they will result in good or evil depends to a large extent upon the action of our medical societies. Up to the present time, our societies have been inclined to ignore these organizations in the belief that they were attempting to commercialize the profession. Would it not be a far wiser course to indorse the movement where it is found that the intent is to render a real service which is in keeping with the program of educating, now being carried on by our state and national associations? Would it not be safer, both for the profession and the

general public, if we would interest ourselves in these organizations to the extent of lending them the assistance of scientific knowledge?

A great many medical men object to these organizations on the ground that they would tend to take business away from the general practitioner, but this objection, we feel sure, is due to a lack of knowledge of how these organizations operate. Instead of taking business away from the family physician, the tendency would be to create business for him. The family physician is too busy to give the necessary time to making these periodic physical examinations, even if he were properly equipped for making them. An organization, such as I have mentioned, would have at its command all of the scientific instruments necessary for these examinations, and would also have a complete laboratory equipment for making the many analyses necessary. If this equipment was in charge of competent physicians, there is no doubt but that many incipient cases of degenerate disorders would be brought to light, which were not suspected by the patient or the family physician. It is in this way that the general practitioner would benefit, for in no instance would the medical staff of the organization treat any case which came to its attention. When a patient was found to be in need of medical attention, he would at once be sent to his family physician for treatment.

In addition to sending the patient to the family physician for treatment, the organization would maintain a file of case histories which would, at all times, be open to the general practitioner, and from which he could get information concerning his patient, that, because of the cost in time and equipment, he could not secure for himself. In this way, such an organization would act as a clearing house for the medical profession.

The need for our coöperation with the laymen in this work lies in the fact that only through advertising can a large enough following be secured to make a thing of this kind financially practical, and because of the nature of our profession, it is far better that this advertising be done through a layman's organization.

This movement is on foot and is gaining headway every day. Can we longer ignore the importance of the work or the desirability of keeping it, to a large extent, under the direction of the profession?

Ampules Solution Pituitary Extract-Mulford, 0.5 c.c.—Each ampule contains 0.5 c.c. of pituitary solution-Mulford (New and Nonofficial Remedies, 1924, p. 229), H. K. Mulford Co., Philadelphia.—*Jour. A. M. A.*, Jan. 17, 1925.

TOTE FAIR.*

BY

J. F. OWENS, M. D.,

PLAINVIEW, TEXAS.

In selecting my subject for the formal opening of my section in this program, I hasten to say that I have not done so because of a belief that the prevalent spirit among doctors is not good. Neither do I believe that our profession is lacking in Utopian ideals. I believe that we are in the midst of the most stupendous effort in the history of medicine, not only to render service to the unfortunate who have fallen victims to disease and harmful environment, but also to raise the standards of physical manhood through scientific measures, to a plane hitherto unknown. I further believe that this tremendous task is being done in a spirit that is born of a true conception of the universal brotherhood of man. Service is the real incentive behind the efforts of medical men of today, and I do not believe there has ever been a time when avarice played so small a part in the field of medicine as it does at this hour. I do admit, however, that it behooves us, as custodians of the public health, to be ever on the alert and to leave no stone unturned, spare no effort, and flinch from no personal sacrifice to keep ourselves purged from every hindrance to our onward march; an accomplishment which we all recognize as getting its greatest impetus through coöperation and the study and application of that universal code of ethics that we find so beautifully portrayed in the sublime injunction, "Whatsoever ye would that others do unto you do you even so unto them." The elongated "Ego," the royal pronoun "I," is the projecting stumptoe that thwarts the effor to apply the golden rule or, to use the more common parlance, to "tote fair."

Two great common factors enter into every human life, the scaena and the morpha, the scaena meaning the environment and the morpha the essence of being, the life, the thing environed. Without the ideal scaena we might be influenced by environment that would warp and twist into distorted character the morpha of idealistic proportions. Who has not seen pure Anglo-Saxon blood incite the motive that propels the hand that marks the life of degeneracy, because of faulty scaena or environment; and on the other hand, who has not seen the beneficiary of enchanting environment sneak into his life bits of dirty emanations that cropped out, because of a shady morpha or inherent essence of life.

*Read before the Panhandle District Society Meeting, Lubbock, September 16, 1924.

Being a lover of horses, I have witnessed many races and studied the individual characteristics of the entries, and in so doing I found so many parallels to human and professional life. At the start, the fleabitten gelding almost invariably jumps in front of and bumps into the sides of his competitors, showing unmistakably his intention of getting advantage over the other entries in the race. The real race horse shows his confidence in his ability by his indifference to position or advantage in the start, his confidence in his own prowess making him noticably fair with his competitors.

Who has not seen the same inherent characteristics in some members of the medical profession? Thank God, the bunch is nearly all dead that was guilty of the grosser unethical deeds of littleness! We no longer have the doctor who goes sniping around after his predecessor, tasting a pill here and turning up his nose there, while freely interspersing his actions with the smile of sarcasm and knowing looks. In that early day all such actions were devoured by a scandal-mongering laity that found sweet morsels in the debris that fell from the crumbling edifice of our professional castle. I say they are nearly all dead; I am so sorry to have to admit that we still have a few fleabitten geldings on the great world turf of thoroughbreds. The scaena or the morpha in their lives was wrong; it may be just a case of contamination by environment, a faulty scaena; not half so bad as when the fault is inherent in a fleabitten morpha. The poor devil inherently afflicted by low principles is of all men most pitiable. Such a character may be fed on the finest flour all the days of his life, and yet his emunctories would eliminate husk in spite of the entreaties of angels or the bellowing of demons from the innermost recesses of regions infernal.

A goodly portion of my philosophy was gleaned from fields about me while sitting on a rail fence that marked the boundary of the outskirts of civilization. Holding this position, I frequently witnessed what was known as community "Log Rollin's." The fallen trees on timbered lands were cut into manageable lengths and then literally toted to piles and heaps by the sturdy yeomen of the frontier, there to be cremated as a sacrifice to the oncoming wheels of civic progress. In this nonesthetic field, as in every other walk of life, ideals were born and heroes made; fair play being the ideal and superstrength marking the hero. Here men walked in pairs, carrying their common load evenly balanced on a handstick between them. Woe betide the man who slipped the stick throwing the heavier part of the burden on his rival on the other side of the log! No criminal was ever more quickly or vehemently denounced by a court of justice then were the men at the "log rollin's," who would not tote fair.

I am afraid I feel even now the gentle tap, tap, tap of my telepathic instrument as some good conscientious doctor tries to tell me he has seen the very thing I have described, in spirit manifest in our holy profession. Bow your heads, gentlemen, and breathe a prayer invoking the spirit of Hippocrates to anaesthetize itself, and then disconnect the wires leading to the haven of eternal rest until we can purge the field of labor from the man who would slip the handstick on his mate on the other side of the log and fail miserably to tote fair. Does there yet remain a soul so vile, wearing the obstetric gown or surgeon's tunic, as to by word, look, action or in anyway whatsoever, cast an unwarranted reflection upon his associates in the most noble of all professions? Let us look into our very souls and if, perchance we hear the fearless denunciation of our own conscience crying out, "Thou art the man; thou art the akin who purloined the family chest, and stole from your brother that which you could not return. Thou art the man who bumped into your competitors when you entered the race. Thou art the man who slipped the handstick in the logging field and forfeited your right to even honorable mention in fair contest among men for prowess in achievement. Thou art the man whose scaena or environment has implanted the fetor of the cancer in your soul, or else whose morpha or inherent life was evolved from a cell that was destined by natural law to materialize into a fleabitten, cheating gelding on the race track of life, and the kind of man who would slip the stick on his partner while carrying a common burden in the 'log rollin' field."

In my reference to the doctor doing business on the square, I have dealt so far only with the relationship of doctor to doctor. There is, however, another phase of a doctor's life that offers vast opportunity for applying the gospel of the golden rule, and that is the relationship of the doctor to his clientele. In this field the doctor has to be big, or else fall far short of his duty as well as his privilege in the premises. Here, you not only have to treat the other fellow as you would have him treat you, but you have, by sheer force of character, to force him to do what is best for him—and this often over his protest and in spite of himself. Your reward for such service will be the condemnation of the ignorant and the establishment in the minds of those who should know better, of the belief that doctors through their organ-

izations, are a veritable trust, pilfering the pockets of the helpless laity, while basking in the joys of special legislation formulated at their dictation and for selfish ends.

Let us play the game of life in absolute frankness, remembering ever that ours is no ordinary calling, and that the doctor with a strong personality, with a clear reasoning brain, and a far-seeing eye has a special duty to perform! No man carries greater responsibility to the generation in which he lives than the custodian of public health. It is the doctor who guides the mother through the greatest crises of her life, and it is in his hands that the helpless babe rests before the anchor rope is cut that sets the frail bark adrift on the great ocean of life. And when life's day is over and the eventide is announced by the inelastic step, the dimmed vision, the shaky hand and the hardened artery, the old man must come back to his friend of the morning and commit himself unreservedly into his hands, there to be comforted and his hand held in a firm and friendly grasp until his eyes are closed in eternal sleep and his spirit has winged its flight out, far out into the vast unknown.

With the picture of this sacred trust fixed in our minds, let us, I beg of you comrades, vow with all the earnestness of our being to play the game absolutely fair with the laity, and with zealous care to watch our step in the professional arena, spurning ever the suggestion that we slip the stick and thereby throw unwarranted weight on our brother on the other side of the log.

MISCELLANEOUS

ON HAVING APPENDICITIS OR JOINING THE ANTI-APPENDIX LEAGUE.*

BY

John W. Focke, Galveston, Texas.

The league has no candidate in the field for presidential nominee this year, in fact, has up to now, as far as I know, made no political claims, or pretenses. However, the field is large, and its endeavors and aspirations are equally so; consequently no telling what might happen in the next four years.

A prerequisite, and it must accompany your application, is a pain. To be passed on quickly, the pain should be in the right side, low down; the more acute the pain, the less the chance of being blackballed. You call on your family physician. After considerable pressing—trying to feel the lower vertebrate through your abdomen—you see an intelligent sparkle in the examiner's eye, and your chances are getting bright for the initiation. All is well, and you go home and start the hungerfest. Your breakfast is coffee—meaning one cup of coffee—not coffee and toast, or coffee and doughnuts. For dinner a glass of milk, and maybe a raw egg, provided you can think of chicken, while the raw egg goes down. Supper consists of a cup of tea. Two days of this, though the pain continues, and two holes have been taken up in your belt, and you begin to believe that your application has been tabled, when—Bingo! the doctor telephones that Room Eight has been engaged for you at the hospital.

You feel now that you don't know whether you want to become a member or not. There are a good many reasons why not: some prominent persons, friends or acquaintances maybe, have passed out while being initiated; you have a wife and several children dependent upon you; your *will*, perhaps, is not made; business will not permit your absence; or a note is due at the bank.

All these things pass through your mind; however, you say nothing, but go to bed that night with these thoughts uppermost in your mind.

You don't have to have central call you the morning of the initiation, the time for which is set for 12 o'clock. But you must be at the hospital at 9 o'clock for preoperative treatment. Really, you would like to put it off just one more day, but it is too late; your application is posted and the special membership committee has passed on it.

You arrive at the Hospital, and are confronted with the fact that you really know very little of your antecedents. Your grandfather's name finally comes back to you as the registrar puts down your family-tree. (Some day I'm going back there and get it, so that my descendants won't have to contend with the same embarrassing proceedings.) The last questions, "What telephone?" and "Whom shall we notify?" you think irrelevant, as he does not mention for just what purpose any notice should be promulgated, either before or after the initiation.

After a short ride in the life and death elevator, you are ushered into Room Eight. And you sit there with your wife for just a few minutes. You are still thinking about these last questions when, without announcement, a young lady in uniform, walks briskly in, and inserts a glass tube into your mouth, shutting off all conversation. Then she takes hold of one of your hands and caresses it for a few moments, all the while looking at her wrist watch—though your wife is still with you.

A tall young man, wearing an apron, and with about four days' growth on his face, enters without salutation—it is evidently not customary, although it is really a perfectly good morning. He has a razor in his hand, and to your question, "Are you the barber?" he answers, "Supposed to be." He thereupon asks you, "Where do you want to be shaved?" and since your face does not need it, and you had come to the institution to have an appendix removed, you suggest your right side. So you recline in the bed, while the disorderly person—whom you afterwards find out is an "orderly"—lights a cigarette, and proceeds to remove the first layer of your skin. Word now comes back that *all sides* must be shaved, so at it again for the second time! Time's up, and the razor refuses to shave hairs any more.

After a few moments, the disorderly orderly appears again with what at first sight looms like a five-gallon can with a garden hose attachment. Upon a second look, however, it diminishes somewhat in size; and to the said disorderly orderly's query, "How much of it do you want?" you, having no ready answer, finally ask, "How much have you got?" "She's full," he says. "All right, go ahead," you groan. He proceeds to get busy with the unencumbered end of the hose, but seeing the tubing rapidly disappearing, and fearing he has passed his objective, you sing out, "Wait a minute!"—whereupon Niagara is released, and water starts to seek its level. * * * *

*Being the personal experience of a candidate who was successfully initiated into the League.

Back into bed and the nurse enters to inspect the shaving job, and you are told the doctor upstairs will never accept you in this shape, so out comes your own nurse's very own razor, and you take unto yourself shave number three.

Next, a shot in the arm; and the wheel-barrow, with attendants approaches. Once more you ride in the life and death elevator, arriving at the "grand room for operations." A few members of the Ku Klux Klan are already present. The shot is at work, and you are reaching the stage where you don't give a d——. Suddenly your ears prick up per force of habit, when the conversation drifts to the topics of the grand room—those that entered and didn't pass, after being initiated, etc., etc. Well—but your case is different—no trouble at all. The conductor of ceremonies is a little late, but you *wait*. Finally they roll in the gas tank, and the good fresh air is shut off while the pump's discharge is substituted. You take it all good-naturedly (they all do when the proceedings reach this stage). Only leading questions are asked you—you are allowed no counsel during the proceedings—and you are soon "on your way."

After two or three hours have been taken out of your life, you awaken much relieved, though with a further desire to sleep, and quite indifferent to your surroundings. Later in the afternoon, the chief operator (conductor of ceremonies) comes to your room and pays his respects. You probably ask him, "When do we eat?" and his reply, "Day after tomorrow," is not very encouraging. That night is five years long, but morning comes at last, and with it a glass of ice water. Plenty more of it that day, and the next; you don't ever have to ask for it.

Dinner is 24 hours late, and only arrives on the third day. It is not necessary to get out your store-teeth, which have been reposing in your valise, as the bill-of-fare consists of a glass of cow's milk. Perhaps you never did like milk, but notwithstanding a pipe-line is laid into your room, and every three hours, day and night, a glass of milk is poured into you, regardless. The only variation in diet is the privilege of sucking on a glass thermometer for a few moments, three or four times daily, this pacifier being passed from room to room by the nurses. (I thought one of the other patients must have eaten steak and onions one day—it may only have been the odor from the kitchen.) Soon eggs are added to your ration, and gradually you reach a normal light diet.

About this time the previously mentioned can and hose begin to come and go, frequently. Then one evening when you have not had your internal bath, preferring to wait until just before going to sleep, you put in your call for the operation. Imagine your surprise and alarm, when word is sent back that there is "nothing doing" in that line for you—no orders have been transmitted to the night staff, and further your chart shows that it isn't necessary! Well, you know better. * * * * You conclude that it was necessary to send and get permission, from either the county court, or else from one of your city fathers, to grant your request. When you are able to be out, you will probably make an earnest effort to have your city charter amended so that delays of this nature may be overcome.

On the third or fourth day, a young man (whom you afterwards learn is an interne) comes in, paper and pencil in hand. Though you do not feel any too fresh and spry, it looks to you like another perfectly good morning outside. The young man, however, adheres strictly to custom, and makes no outward signs or observations as to whether it is morning, noon, or night, or whether good, bad, or indifferent atmospheric conditions prevail. It is more history that he is after. Having answered numerous questions, including the immediate actual cause of death of all of your ancestors as far back as you can remember, you are asked once more, "Are you married, yes or no?" There seems to be some doubt about this, so you introduce your wife who happens to be present, but the young gentleman pays no attention to any side-remarks, disdaining to look up from the questionnaire before him. You are relieved to find out later that the biography of all members, dead or alive, is recorded in the archives of the Anti-appendix League.

Another day or two passes, and visitors are allowed to see you—the new member. Many friends call, all members of the league, relating in detail their initiation experiences, each ones more harrowing than the others. By comparison yours was a mere trifle, not even an incident worthy to relate. Home-coming day soon arrives, and an ambulance is ordered to take you back to the bosom of your family. You have to answer one more question, however, as no start can be made until the ambulance driver is informed whether his passenger is dead or alive.

I will be very glad to accommodate those candidates who want more minute details, because there are some things that can be better said than written, and there are those things that one should know before putting himself into the hands of a closed corporation of internes, nurses and orderlies.

ANNUAL CONVENTION TEXAS STATE DENTAL SOCIETY.

The Texas State Dental Society will hold its forty-fifth annual convention at San Antonio, Tuesday, Wednesday, Thursday and Friday, May 19-22, 1925.

The Gunter Hotel has been selected as headquarters, where all features of the meeting, including manufacturers' and dealers' exhibits, will be held.

Exhibitors are invited to attend. To secure space, they should address Dr. W. H. Nugent. Chairman Exhibit Committee, F. & M. Bank Bldg., Fort Worth, Texas.

Members of the profession may look forward to a program of great interest, upon which some of the best men from other states will take prominent parts.

Visitors, both physicians and dentists, upon presentation of their 1925 membership cards, will be welcomed and are cordially invited to attend.

J. G. FIFE, Sec'y-Treas.
Medical Arts Bldg., Dallas, Texas.

ACQUIRED SYPHILIS IN A FIVE-YEAR-OLD CHILD.

To the Editor:

Because of the rarity of acquired syphilis at this age and the uniqueness of the apparent mode of infection, the following case report seems justified:

E. P., aged 5 years, entered the Presbyterian Clinic on August 13, 1924, complaining of a "sore" on the right foot. The patient was a well nourished and well developed boy of about five years of age. Physical examination was negative except for musical rales heard on auscultation of the chest, several verrucae on the dorsal surface of the left hand, enlarged lymph glands in the right inguinal region and an area of superficial ulceration on the third right toe just posterior to the nail. The eyes, ears and teeth were negative. The Wassermann reaction at this time was negative.

His father was living and well, but his mother was being treated for secondary syphilis at the Baylor Clinic. She had experienced three pregnancies, and no miscarriages; the first child being living and well and 10 years old, the second child living and well, 6 years old, and the third child was the patient. He was

born at nine months after a normal labor and weighed 6 pounds. He walked at eleven months and talked at 2 years of age.

The patient was next seen at Baylor Hospital three months later. At this time there were a disc-shaped lesion, purplish red in color on the third right toe just posterior to the nail, markedly enlarged right inguinal glands of firm consistency, a macular rash over the body, mucous patches in the mouth and a patchy alopecia of the syphilitic type. The remaining superficial lymph glands were palpable but not distinctly enlarged. The patient therefore presented the classical picture of secondary syphilis. The blood Wassermann at this time was strongly positive.

The mother had been a patient in our syphilitic clinic for three months. At the time of the initial appearance of the lesion on the patient's toe, the mother was being treated for secondary syphilis, evidenced by a maculopapular rash, mucous patches in the mouth and condylomata. It is presumed that she infected her son with whom she was in constant contact during her secondary period, by dressing a superficial abrasion on the child's toe. Congenital syphilis in the child can be excluded on the grounds that the mother acquired syphilis five years after the birth of the patient, her marital history, and because the color and induration of the patient's

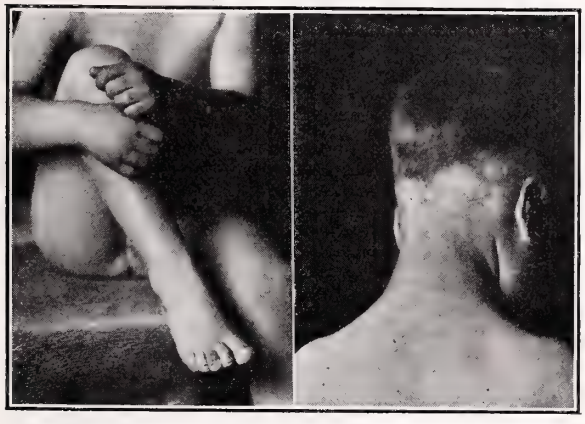

FIG. 1. Showing primary lesion on third right toe of five-year-old child.
FIG. 2. Showing moth-eaten areas of alopecia, and macular secondary eruption. Same case as Fig. 1.

digital lesion with enlarged regional lymph glands immediately suggested chancre, and because of the fact that the patient displayed a negative blood Wassermann and no evidence of congenital syphilis at a period three months previous to the secondary eruption.

The patient has to date received 5 intravenous injections of 0.15 grams neosalvarsan and two intramuscular injections of ¼ gr. mercury salicylate. During the next year we propose to continue our treatment until two courses of salvarsan of eight injections each and two courses of mercury salicylate of ten injections each, have been given. Repeated Wassermann reactions at the end of one year will be our guide as to further treatment.

—BEDFORD SHELMIRE, Dallas, Texas.

WESTERN PHYSIOTHERAPY ASSOCIATION MEETING.

The seventh annual meeting of the Western Physiotherapy Association will be held at the Little Theatre, Kansas City, Missouri, April 16-17, 1925.

Members of the association desiring to present cases for diagnosis or operation may make arrangements for these cases to have the personal attention of Dr. T. Howard Plank, of Chicago.

The following doctors will participate in the program:

Frederick H. Morse, Gustav Kolischer, Miles J. Breuer, J. L. Myers, Lynne B. Greene, A. David Willmoth, E. C. Henry, Wm. E. Howell, A. J. Pacini, Curran Pope, Edward G. Blair, Byron Sprague Price, Burton B. Grover, T. Howard Plank and W. B. Chapman.

The Western School of Physiotherapy under the direction of Dr. B. B. Grover, of Colorado Springs, Colorado, will hold its seventh annual session April 9th, 10th and 11th, at the Hotel Bellerive, and April 13th, 14th and 15th, at the Little Theatre. This school is largely postgraduate in character and for physicians only. Full information concerning both the Annual Meeting and the School of Physiotherapy can be obtained from the secretary, Chas. W. Fassett, M. D., 115 East 31st street, Kansas City, Mo.

JOINT SESSION OF EXECUTIVE AND PROGRAM COMMITTEES OF TEXAS ASSOCIATION OF SANITARIANS.

A joint session of the executive and program committees of the Texas Association of Sanitarians met in Austin, January 30, 1925, the following members being in attendance: Dr. A. H. Flickwir, Houston; Prof. W. A. Buice, Waco; E. W. Steel representing C. C. Hays of Waco; L. O. Bernhagen, of Beaumont; Dr. H. O. Sappington, of Austin; R. E. Tarbett, El Paso, and E. G. Eggert, of Austin.

A motion was adopted accepting the invitation of the city officials of Waco and the president of Baylor University to hold the next annual meeting and short school at Waco, the latter part of October, 1925—the exact date to be determined later.

The president, Dr. A. H. Flickwir, designated the new program committee as follows: Dr. W. A. Buice, chairman; Dr. W. T. Gooch, E. W. Steel, Dr. Dru McMicken, Dr. H. O. Sappington and E. G. Eggert.

The advisory council for the current year were appointed as follows: Dr. Holman Taylor, Fort Worth; Dr. W. S. Bizzell, College Station; R. E. Tarbett, El Paso; Mrs. Margaret Conger, Waco; Rt. Rev. C. S. Quin, Houston; C. N. Avery, Austin; V. M. Ehlers, Austin; Dr. H. O. Sappington, Austin; Prof. Hall, Rice Institute, Houston; H. W. Van Hovenberg, Texarkana; Dr. C. M. Rosser, Dallas; Dr. J. D. Blevins, Beaumont, and John H. Burns, Waxahachie.

UNITED STATES CIVIL SERVICE EXAMINATIONS.

Applications will be received for competitive examinations to fill vacancies occurring in the Federal Classified Civil Service throughout the United States for the positions of:

Junior medical officer, assistant medical officer, associate medical officer, medical officer, and senior medical officer, and for graduate nurse and graduate nurse (visiting duty). These examinations have been announced by the United States Civil Service Commission. The salaries range from $1,860 per annum for junior medical officer, to $5,200 per annum for senior medical officer; and from $1,680 a year as staff nurse to $2,500 per annum for chief nurse in the U. S. Veterans' Bureau Hospital Service, and from $1,020 a year for staff nurse, to $1,800 a year for chief nurse in the U. S. Public Health Service. In this latter service, quarters, subsistence and laundry are furnished in addition to the salary. Ap-

plicants for the above positions should at once apply for forms 2118 and 2398 (for position of medical officer, all grades), and for forms 2415 and 2380 (for positions of graduate nurse). These forms may be obtained from the Civil Service Commission, Washington, D. C., and from the secretary of the Civil Service Board, Custom House, Boston, New York, New Orleans, Honolulu, Hawaii, or postoffices at Philadelphia, Atlanta, Cincinnati, Chicago, St. Paul, Seattle, San Francisco, Denver and the Old Custom House at St. Louis, or Administration building, Balboa Heights, Canal Zone, and to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R.

Applications for these positions will be received until the hour of closing business June 30, 1925.

WHO KILLED BILL JONES?*

Who killed Bill Jones?
"I," said the fly, "when I sipped his pie,
After drinking the tear from the dying eye
Of Tabby, the cat, in the garbage vat—
I killed Bill Jones."

Who ruined the next town?
"I," said the sewer, "I'm a death-dealing brewer;
I vomited slime from my own city clime—
And the river did flow to the city below—
I ruined the next town."

Who blinded the child?
"I," said the Sport, "in Vanity's court,
I reveled in vice; I yielded to sin;
Was poisoned without and poisoned within—
I took no thought of the sowing so wild—
I blinded the child."

Who caused the scourge?
"I," said the physician, "in my fatal ambition
To have no disfavor with patient or neighbor—
I said nought of the ill under quarantine bill—
I caused the scourge."

Who spread the plague
So deadly and white, by day and by night?
"I," said the cow with a faraway low,
"My germ-laden milk did other germs grow—
I spread the plague."

Now, who'll save the land
From this perilous brood of garbage can kittens,
And of germ-laden food, of drains that corrupt,
And doctors who lie, of vices that blind,
And the death-dealing fly?

—MRS. J. M. F. GILL, Burkburnett, Texas.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Mallinckrodt Tetrabromphenolphthalein Sodium Salt.—A brand of tetrabromphenolphthalein sodium —N. N. R. For a discussion of the properties, actions, uses and dosage, see *Jour. A. M. A.*, Dec. 27, 1924, p. 2095. Mallinckrodt tetrabromphenolphthalein sodium salt is supplied in 5 Gm. ampules. Mallinckrodt Chemical Works St. Louis.—*Jour. A. M. A.*, Jan. 3, 1925.

Diphtheria Toxin-Antitoxin Mixture O.1L+-Gilliland.)—A diphtheria toxin-antitoxin mixture (see New and Nonofficial Remedies 1924, p. 299), each c.c. of which represents O.1L+ dose of diphtheria toxin neutralized with the required amount of diphtheria antitoxin. Marketed in packages of three 1 c.c. ampules; in packages of thirty 1 c.c. ampules; in packages of three 1 c.c. syringes; and in ampules containing respectively 10 c.c., 20 c.c., and 30 c.c. Gilliland Laboratories, Ambler, Pa.

Bacillus Bulgaricus-Squibb.—A culture of Bacillus bulgaricus, marketed in tubes, each containing 12 c.c. Bacillus bulgaricus-Squibb is designed for internal administration and for direct application to body cavities, abscesses and wounds. See "Lactic Acid-Producing Organisms and Preparations," (New and Nonofficial Remedies 1924, p. 169). E. R. Squibb & Sons, New York.

Neorobin.—A product obtained by the reduction of chrysarobin. The actions and uses of neorobin are the same as those of chrysarobin. It is claimed that neorobin is somewhat more active than chrysarobin and that its staining qualities are less than those of chrysarobin. Like chrysarobin, neorobin is used in the treatment of skin diseases, especially in psoriasis. It is used in the form of ointments which must be freshly prepared. Neorobin is marketed in vacuum sealed tubes containing 1 and 5 grains, respectively. H. K. Mulford Co., Philadelphia.

Intracutaneous Tuberculin for the Mantoux Test.—A preparation of Tuberculin Koch (New and Nonofficial Remedies, 1924, p. 309), marketed in packages of one vial containing 0.0001 Gm. tuberculin "O.T." accompanied by a vial containing physiological solution of sodium chloride sufficient to make 1 c.c. Lederle Antitoxin Laboratories, New York.—*Jour. A. M. A.*, Jan. 10, 1925.

Tablets Benzyl Fumarate-Abbott, 5 grains.—Each tablet contains 5 grains of benzyl fumarate-Abbott. —(*Jour. A. M. A.*, July 24, 1924, p. 41). The Abbott Laboratories, Chicago.

Ovarian Substance—L. and F. Desiccated.—The entire fresh ovary of the hog, freed of extraneous matter, dried and powdered without the addition of diluent or preservative. For a discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1924, p. 220. The product is marketed in 2 and 5 grain capsules and in 2 and 5 grain tablets. Lehn and Fink, Inc., New York.

Ovarian Residue—L. and F. Desiccated.—The residue from the fresh ovary of the hog, after removal of the corpus luteum, dried and powdered without the addition of preservative or diluent. For discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1924, p. 220. The product is marketed in the form of 5 grain capsules and 2 and 5 grain tablets. Lehn and Fink, Inc., New York.

Benzyl Succinate-Merck.—A brand of benzyl succinate—N. N. R. For a discussion of the actions and uses of benzyl compounds, Merck & Co., New York.—*Jour. A. M. A.*, December 6, 1924.

Sterile Ampules Mercuric Potassium Iodide, 0.017 Gm. (¼ Grain).—A solution of potassium mercuric iodide obtained by dissolving red mercuric iodide 0.01 gm., and potassium iodide, 0.01 gm. in water, 1 c.c. Swan-Myers Co., Indianapolis.—*Jour. A. M. A.*, December 6, 1924.

Hypodermic Tablets Strophanthin 1/100 Grain-Lilly.—Each Tablet contains strophanthin U. S. P. 1/100 grain. Eli Lilly & Co., Indianapolis.

Proposote.—A condensation product of creosote and phenylpropionic acid. It contains the equivalent of 50 per cent of creosote. Proposote is not decomposed by the gastric fluids and passes the stomach practically unabsorbed. It is decomposed in the intestine and its components are chiefly eliminated

*Read before the Burkburnett University Study Club, at the Public Health Session, January 28, 1925.

through the kidneys, but it is claimed that a part of the liberated creosote is eliminated through the respiratory tract. Based on this latter elimination, the administration of proposote is claimed to be of value in bronchitis and coughs due to bronchial infections. Proposote is used for the same purposes for which creosote is administered. It is marketed in the form of capsules containing 5 and 10 minims, respectively. Parke, Davis & Co., Detroit.

Standard Radium Solution for Intravenous Injection, 10 micrograms Ra.—Each ampule contains radium chloride-Standard Chemical Co. (New and Nonofficial Remedies, 1924, p. 277) equivalent to 10 micrograms of radium element in physiological solution of sodium chloride, 2 c.c. Radium Chemical Co., Pittsburgh.

Standard Radium Solution for Intravenous Injection, 25 micrograms Ra.—Each ampule contains radium chloride-Standard Chemical Co. (New and Nonofficial Remedies, 1924, p. 277) equivalent to 25 micrograms of radium element in physiological solution of sodium chloride, 2 c.c. Radium Chemical Co., Pittsburgh.

Iletin (Insulin-Lilly) U-10, 10 c.c.—Each c.c. contains 10 units of iletin (insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152.) Eli Lilly and Co., Indianapolis, Ind.

Iletin (Insulin-Lilly) U-20, 10 c.c.—Each c.c. contains 20 units of iletin (insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152.) Eli Lilly and Co., Indianapolis, Ind.

Iletin (Insulin-Lilly) U-40, 10 c.c.—Each c.c. contains 40 units of iletin (insulin-Lilly) (New and Nonofficial Remedies, 1924, p. 152.) Eli Lilly and Co., Indianapolis, Ind.

Tincture Digitalis Purified (Fat Free)-S. & D.—A fat-free tincture of digitalis corresponding in strength to tincture of digitalis-U. S. P., containing 45 per cent. of alcohol. It is standardized by the one-hour frog method of the U. S. Pharmacopoeia. The actions, uses and dosage are the same as that of tincture of digitalis U. S. P. Tincture digitalis purified (fat-free)-S. and D. was introduced at a time when the "fat" of digitalis was believed to cause gastric disturbances. At present this claim of superiority is not tenable and the preparation is sold simply as a standardized tincture of digitalis. Sharp and Dohme, Baltimore.—*Jour. A. M. A.*, Jan. 24, 1925.

Antimony Sodium Thioglycollate.—A compound formed by dissolving antimony trioxide in a solution of a mixture of sodium thioglycollate and thioglycollic acid. It contains not less than 37 per cent. of antimony. The actions and uses of antimony sodium thioglycollate are the same as those of antimony thioglycollamide, but it is more soluble and in higher doses appears to be less toxic. Hynson, Westcott and Dunning, Baltimore.—*Jour. A. M. A.*, Jan. 31, 1925.

NEWS

An Additional Unit for All Saints Hospital in Fort Worth was provided for by the Episcopal Diocese of Dallas when that body agreed to appropriate $175,000 for this purpose. It is understood that work on the addition to the hospital will be begun at an early date.

Sale of American Legion Memorial Hospital near Kerrville, Texas, to the Federal Government for approximately $1,700,000, was authorized by the Daniels-Purl House American Legion Bill, which received the signature of the Governor on February 19. If the U. S. Veterans' Bureau agrees to pay this amount for the hospital, $200,000 of the sale price will be turned over to the American Legion as a trust fund to be used for the benefit of disabled ex-service men. General Hines, Director of the Veterans' Bureau, is quoted as favoring the acquisition of the American Legion Memorial Hospital by the Federal Government, which at the present time is leasing this institution from the State.

A Chalk Talk on Mosquitoes was recently made by Dr. B. A. Kirkpatrick before the High School Literary Society of Thrall, Texas.

Of the more than five hundred varieties of mosquitoes, he dwelt particularly on the common varieties that are known to be the carriers of dengue, yellow fever and malaria. It took about 30 minutes to deliver the lecture which was listened to with interest by quite a large audience.

The material for this talk was furnished by the State Board of Health and included a printed outline for the lecture and tracings for the chalk pictures.

Texas State Board of Medical Examiners Elect Officers. The new Board of Medical Examiners appointed by Governor Miriam A. Ferguson, met at the Jefferson Hotel, Dallas, February 24, for the purpose of organization. The following officers were elected: Dr. H. C. Morrow, Austin, president; Dr. Guy P. Sherrill, Temple, vice-president, and Dr. T. J. Crowe, Dallas, secretary (re-elected). Those members of the newly constituted board who attended the meeting were: Drs. H. C. Morrow, G. P. Sherrill, T. J. Crowe, and J. E. Daniel of Honey Grove, J. M. Witt of Waco, Cyrus E. Day of Abilene, J. M. Watkins of Luling, Will Cantrell of Greenville, H. W. Cummings of Hearne, J. W. Pittman of Belton, and J. H. McLean of Fort Worth. Of these, Drs. Morrow, Crowe, Watkins and Daniel were members of the old board.

The date for the next examination of applicants for license to practice medicine in the State, was fixed for June 23-25, the examinations to be held in the House of Representatives at the State Capitol in Austin.

A Partial List of Appointments for Interneships in various hospitals in the state and elsewhere, selected from members of the graduating class of the State Medical College, were recently announced by Dr. William Keller, dean.

Four instructorships in the State Medical College have also been awarded to the following members of the class: J. K. Glenn of Beaumont, instructor in anatomy; W. G. Whitehouse, Cleburne, instructor in anatomy; Paul Brindley of Harlingen, instructor in pathology, and J. R. Blundell, Lockhart, instructor in anatomy.

The interneships announced to date include:

John Sealy Hospital, Galveston—W. S. Red, Austin; C. A. Poindexter, Temple; J. E. Johnson, Thalia; P. C. Pedigo, Strawn; P. E. Suehs, Giddings; W. C. Sadler, Palestine; E. Robertson, San Antonio; L. L. D. Tuttle, Poteet.

Santa Rosa Hospital, San Antonio—W. A. Reiley, Sabinal; S. W. Bohis, Pfleugerville; H. B. Wards, Blanket; B. B. Griffin, Galveston.

Scott and White Hospital, Temple—M. E. Suehs, Giddings; P. A. Wildward, Cleburne; D. M. English, Kenard.

Cleveland City Hospital, Cleveland, Ohio—W. W. Maxwell, Jr., Austin; H. L. Alexander, Houston.

Northwest Texas Hospital, Amarillo—J. H. Robberson, Gainesville.

Robert B. Green Memorial Hospital, San Antonio—R. G. Hallum, Brownwood; B. R. Eppright, Manor; C. S. Sykes, Galveston; E. W. Coyle, San Antonio.

Harris Sanitarium, Fort Worth—W. R. Powell, Jasper.

Houston City and County Hospital—L. M. Ship, Henderson, G. H. Merritt, Center Point.—*Dallas News.*

Interstate Post Graduate Assembly Clinic Tour directed by the Tri-State District Medical Association, concerning which previous announcements have been made in the JOURNAL, will include medical centers in Canada, the British Isles and France. The tour will start from Chicago, May 17, 1925, and the first point included will be Toronto. Following a visit to the Clinics and the University of Toronto, a trip through the Thousand Islands and the St. Lawrence Rapids will be made, after which clinics will be attended at Montreal, under the supervision of the staff of McGill University. The party will sail for Liverpool, on May 23. An interesting professional program will be given daily on shipboard, with many of America's most distinguished physicians participating therein. It is expected that the party will reach London, June 1.

The next points to be visited will be Liverpool, Manchester, Leeds, Dublin, Belfast, Glasgow, Edinburgh and Newcastle. The time from June 22 to 27, inclusive, will be spent at clinics in the hospitals of Paris. The first sailing for home will be on June 28. The second sailing, permitting physicians to attend the clinics of Lyon and Strassbourg, will be on the 4th of July.

Besides the wonderful opportunities for observing the progress in medicine being made by the great medical centers included in the tour, delightful social affairs and elaborate entertainments will be a feature of the tour.

In addition to the main tour, an opportunity will be given to the physician to visit practically all the clinic centers of Europe, through extension tours. The cost of the main tour from Chicago to Chicago, ranges from $990 for first-class passage and high-grade hotel accommodations, to $750 for third-class passage and moderate priced hotels.

Reservations for the tour will be assigned and preference given on ship and in hotels in the order that they are reserved. These reservations must be accompanied by a check for $65.00 per person. The tour is open to members of the profession in good standing in their state or provincial societies, and their families.

For further information write Dr. Wm. B. Peck, Freeport, Illinois.

SOCIETY NEWS

The Bexar County Medical Society met January 22, 1925, with 55 members and 3 visitors presents.

Dr. I. S. Kahn reported the case of a boy, aged 15 years, suffering from a pleural effusion, following an acute case of pleurisy. The patient was drowsy, the left chest greatly distended, the pulse 138 per minute and the temperature normal. The patient was very dyspnoeic. Between July 11 and August 4 he was tapped seven times, about 1,000 c.c. of clear straw colored fluid, free from blood, being removed each time. After the fluid was withdrawn mediastinal percussion revealed an area twice as broad as normal. Since the pleural cavity would be three-fourths full one hour after it was emptied, an *x*-ray picture was difficult to secure. He developed an extensive oedema on the entire left side of the body, making a diagnosis of mediastinal sarcoma probable, and died the following week. An autopsy revealed a large lymphosarcoma of the mediastinum. Dr. Kahn stated that during the past year he had seen another similar case and considered it rather unusual to see two cases of mediastinal malignancy in so short a time.

Dr. W. E. Nesbit gave a talk on "Personal Experiences with Insulin." He stated that he had been using insulin about two years, during which time he had treated over 100 cases of diabetes with this preparation, these comprising about two-thirds of the total number of cases of diabetes under his care. He stated that one of the distinct advantages of insulin treatment was that the patient could be given a more liberal diet. Insulin, however, did not make attention to diet unnecessary, but on the contrary emphasized proper dietary regimen. If the patient is not *in extremis*, the blood-sugar soon returns to normal after disappearance of sugar in the urine. He followed the plan outlined by Wilder of the Mayo Clinic, of estimating the basal diet according to the surface area of the body. The patient is placed on this basal diet, which, if tolerated, is augmented by other articles of food as required, insulin being used when necessary. The diet should be such as to enable the patient to go ahead with his usual occupation without glycosuria and acidosis supervening. The patient must be given the smallest amount of insulin that will render his urine sugar free and at the same time avoid as far as possible hypoglycemia. Patients with respiratory infections require larger doses of insulin. The complications of diabetes must be met according to the individual case. Superficial gangrene will generally heal if the glood-sugar is kept at the proper level. If amputation becomes necessary, the urine should be rendered sugar free and the patient should be given insulin and glucose just prior to the operation. Such cases often die in spite of all treatment. He thought the outlook for insulin therapy exceedingly bright and that it would improve as experience with this method of treatment increased. In some cases the insulin appears to have enabled the pancreas to recover its lost function, which is the desideratum of insulin therapy.

Dr. H. M. Bush stated that he had seen a diabetic in coma, who had a large carbuncle on the back, and 25 or 30 boils over the body. He had given 50 units of insulin and then excised the carbuncle, following this operation in from 8 to 10 hours with 80 units of insulin. The patient died without regaining consciousness. He had not obtained the brilliant results reported by Banting in the treatment of diabetic coma with 10 or 15 minims of adrenalin, nor had he gotten good results from treatment of the aged with insulin.

Dr. Knapp stated that he had seen several cases treated successfully because of preoperative and postoperative doses of insulin, but that he had seen one case of coma, to whom insulin had been given, pass into a hypoglycemic state.

Dr. George Paschal had heard a paper read by a physician from Milwaukee in which he advised giving from 500 to 1,000 c.c. of glucose solution intravenously before the operation started and after its completion. This treatment was given in addition to insulin.

Dr. Nesbit, in closing, stated that he had seen a case similar to the one reported by Dr. Bush, and that in such cases there had probably been so much damage done that no good effect could be expected from insulin or any other treatment. In his own practice he gave large and oft-repeated doses of insulin in diabetic coma, watching the condition of the patient carefully, as there is real danger of passing from a hyperglycemic to a hypoglycemic state. He had seen the period of unconsciousness shortened by the administration of adrenalin, but had not witnessed such striking changes following its administration as reported by Banting. In a recent article in the *Journal of the A. M. A.*, a case was reported illustrating the fact that insulin often raises the blood-sugar threshold.

Dr. W. S. Hanson read a paper on "Acute Respiratory Affections as Seen in the Present Epidemic." He stated that prophylactic measures were very difficult to adopt since the strains and the virulence of the organisms differ in different epidemics, and at various times during the same epidemic. Other members of the household should be guarded by isolating the patient as soon as possible. The patient should be put to bed at once, as the majority of complications can be prevented in this way. Alkali therapy lessens the number of lower respiratory complications and should be used from the start. In lobar pneumonia stimulants are next in value to opiates. The patient should be digitalized early, for the drug is rather slow in action and its full effect may be needed. Blood-pressure should be watched and also the heart sounds in order that signs of failing of the circulation may be recognized early and proper treatment instituted. He did not believe that serums promised much at the present time.

Dr. A. C. Bronson stated that he had treated a number of acute upper respiratory conditions with chlorin gas and was positive that the gas was germicidal, as a culture taken from the nose and throat after an hour's exposure to the gas showed feeble growths. Constitutional effects of the treatment are similar to those following the administration of saline solutions intravenously. The urine showed red blood cells, in some cases, after an hour's exposure to the gas. The treatment is contraindicated in some cases; in such cases the nasal mucous membrane should be shrunk so that the gas can enter the sinuses. The usual symptomatic treatment of these respiratory affections should be carried out, as the chlorin treatment merely supplements other treatments.

Dr. Nesbit thought that since disabilities resulting from respiratory affections are of such frequent occurrence, that the question should not be considered too lightly In streptococcic pneumonia and diphtheria, digitalis is contraindicated as the conduction system of the heart is retarded In pneumonia due to the pneumococcus the patient should be saturated with digitalis the first two or three days, by giving two minims of a standardized tincture for each pound of body weight, this amount being given in six or eight doses. He also used camphorated oil as a stimulant. Alkalies should be given freely, as the symptoms are due more to intoxication produced by the organisms than the amount of lung tissue involved. In any acute infection, alkalies decrease cyanosis, dyspnoea, etc., by increasing the oxygen-combining power of the blood. Glucose may also be given advantageously with the alkalies.

Dr. Wm. E. Luter thought that a mustard bath aided in keeping up elimination of impurities. One pound of mustard is dissolved in warm water, then strained so as to remove the small particles of mustard which would otherwise float on the surface of the water and irritate the skin, and the remainder put in a tub of water as warm as can be endured by the patient. The patient is allowed to remain in this bath 15 or 20 minutes and then wrapped in blankets for one hour. The free perspiration induced relieves aches and pains, helps to clear up pulmonary congestion, and lessens dyspnoea.

Dr. I. S. Kahn stated that he had never seen a case of chronic bacillary bronchitis without an infection of the accessory nasal sinuses, and that therefore chlorin gas should be used only after applying cocaine to the nasal mucous membranes. Chlorin is very dangerous in allergic cases. Recurrent nasal infections are often of vasomotor etiology; a differential blood count will help in these allergic cases, as they will usually show from 7 to 20 per cent of eosinophilia.

Dr. B. F. Stout stated that Pfeiffer's bacillus was only a secondary invader in influenza as shown by Rosenau of Harvard, the real organism probably being a filterable virus. It is easy to understand, therefore, why vaccines prepared from the Pfeiffer bacillus are not more effective. Vaccines must be prepared from fresh cultures, are good for not over 60 days, and are best not heated. Transplanting of cultures lessens the strength of the vaccines, as shown by the failure of wholesale vaccines made by Rosenow, of the Mayo Clinic, in the epidemic of 1918 and 1919.

Dr. W. H. Hill stated that an autopsy performed on a Mexican dying of influenza, had shown congestion of the surface of the brain, and pin-point hemorrhages. The virulence of influenzal pneumonia should be recognized and the patient treated accordingly.

Dr. E. D. Dumas stated that otitis media is a very frequent influenzal complication and that early paracentesis will often prevent the development of a mastoiditis. In every case of influenza, the ear should be carefully watched from the beginning.

The Bexar County Medical Society met February 5 with 60 members and 3 visitors in attendance.

Dr. R. S. Adams read a paper on "The Value of Routine Blood-Pressure Determination in Major Surgery," which was illustrated by lantern slides.

Dr. Homer T. Wilson opened the discussion. He stated that it was very comforting to the operator to know that the blood-pressure was staying near the normal, and that when he ignored the warnings furnished by the blood-pressure, he often regretted it later. He cited several instances in which abnormalities of blood-pressure had complicated surgical procedure. He had used preoperative digitalization in several cases, but had not noticed any very beneficial results. He advocated the use of adrenalin to tide the patient over a drop in blood-pressure until digitalis could get in its action. He thought that subcutaneous injections were preferable to those given by the intravenous route because of the lessened strain upon a weakened myocardium.

Dr. G. L. Johnson believed that the outcome of an operation can often be foretold by watching the blood-pressure, particularly the pulse-pressure during the operation. If a pulse-pressure of 20 or less is allowed to continue for 15 or 20 minutes, shock and death usually supervene. He had seen little results from the administration of camphor but relied rather upon saline solutions containing adrenalin, given in the loose tissues under the breasts.

Dr. Geo. H. Paschal mentioned the so-called depression test, as used by McKesson, in which, if there was a drop of pressure and an increase of from 15 to 20 per cent of oxygen is given for several minutes, the test is positive for a too deep plane of anesthesia if the pressure returns to normal, and positive for depressive factors incidental to the operation if the pressure does not return normal. The pressure index is another test taken by some. The systolic and diastolic are added together and multiplied by the pulse rate. Anything between 13,000 to 25,000 he considered a normal risk, while anything above or below should be looked upon with grave suspicion.

Dr. P. I. Nixon stated that a chart shown by the essayist emphasized many things that had long been recognized, such as the value of warm packs properly used, gentle handling of the tissues, warm operating room, and the greatest speed in operating consistent with good work. All of these things have a direct bearing upon the prognosis in any case.

Dr. I. T. Cutter thought that great benefit was to be derived from the records shown by Dr. Adams. He had noticed the marked drop in the blood-pressure

in caesarian sections before any appreciable rise in the pulse rate and he considered that this was due not so much to the loss of blood as it was to the sudden release of pressure which had been interfering with the sympathetic control of the blood vessels. Such charts when kept by the anesthetist were very satisfactory to the surgeon, enabling him to better appreciate the real condition of the patient.

Dr. L. J. Manhoff stated that Osborn of Yale had shown that the diastolic pressure represents the resistance of the circulation, and the pulse-pressure the ability of the heart to overcome this resistance. The pulse-pressure is of such extreme value because if there is no ability to overcome the resistance of the diastolic pressure, there can be no circulation and hence shock and death will follow.

In closing, Dr. Adams agreed with Dr. Wilson that as a general rule solutions by hypodermoclysis were preferable to those given by the intravenous route, because every hospital had saline solutions prepared for hypodermoclysis, and also because no extra strain was thrown upon an already weakened heart. In case of extreme loss of blood and shock, however, the solution should be given intravenously. A solution of glucose and gum acacia given intravenously, theoretically gives the most efficient results, but these solutions must be freshly prepared. In taking the blood-pressure, reading pressure on the cuff by the surgeon or his assistant should be avoided. The exact depth of anesthesia should be noted (the lighter the anesthetic, the higher will be the blood-pressure and vice versa). The stage of the operation should be noted, since traction upon the peritoneum usually causes a rise in systolic pressure. The position of the patient always affects the blood-pressure. Any one taking frequent blood-pressure determinations on an anesthetized patient would be impressed with the value of a smooth regular plane of anesthesia.

Bexar County Medical Society met February 12, with about 45 members present.

Dr. Jack Watts presented the case of a boy 13 years of age, who had received a spiral fracture of the upper end of the head of the humerus. After two attempts the arm was set satisfactorily with a spica cast of the shoulder. Not long afterward the child began to have tingling sensations in the arm and hand which were followed by atrophy of the intrinsic muscles of the hand and a contracture of the elbow joint; he could barely move his hand which was a typical claw-hand. Upon operation some six months after the fracture had been received, a cicatricial band was found over the inner cord of the brachial plexus. The arm was not immobilized, and a splendid result was obtained as shown by the freedom of movement, lack of muscular atrophy, etc., about one year after the operation.

Dr. W. E. Nesbit reported a case of tetanus in a negress aged 27 years, who had given a rather indefinite history of having an infection on the left thigh, two weeks prior to the onset of the convulsion. At the time the report was made, the patient's jaws were fixed and she showed risus sardonicus. On the day previous she had been given 100,000 units of antitetanic serum intravenously and 10,000 intraspinally, in addition to sodium bromide and morphine. At the time of the report the patient seemed to be in fair condition and had a fair chance for recovery.

Dr. M. J. Bliem stated that he considered that, as a general rule, serum was of little value after convulsions had occurred. He had been in the habit of giving prophylactic doses of serum, however, in injury cases, in addition to opening up the wound freely and cauterizing with carbolic acid.

Dr. W. E. Luter stated that it was strange that there seemed to be a greater liability to tetanus following gun-shot wounds, and that he always made it a practice to cauterize all punctured wounds with phenol and alcohol and then gave antitoxin. He stated that he had never seen a well established case of tetanus recover, although the larger number of cases that he had seen were before the days of antitoxin. He doubted whether the case reported was really one of tetanus, as the history of the injury was rather indefinite.

Dr. Dudley Jackson stated that he was inclined, with Dr. Luter, to believe that if the case reported by Dr. Nesbit recovered, it wasn't a true case of tetanus. He stated that during a certain period at Robert Green Hospital, only two out of thirteen cases of tetanus had recovered. He considered that magnesium sulphate given intramuscularly in conjunction with the antitoxin in large doses was beneficial, in that it permitted muscular relaxation, allowing the patient some rest and the giving of nourishment.

Dr. Watts thought that the great prevalence of tetanus following gun-shot wounds was due to the horse hair used in the cartridge wads.

Dr. J. H. Biggar stated that it was well recognized that there were different degrees of tetanus. When the patient was having convulsions and trismus and opisthotonos were present, the diagnosis was easy, but cases of undoubted tetanus have occurred when all these symptoms were not present.

Dr. S. P. Cunningham stated that he had known of two definite cases of tetanus that had been cured and that both of these patients had shown opisthotonos and were easily thrown into convulsions.

Dr. W. H. Hill thought, like Drs. Luter and Jackson, that the history of the case reported was very indefinite and that since the patient was a morphine addict, she might be feigning convulsions in order to secure morphine.

Dr. S. R. Kaliski read a paper covering 20 cases of tetanus in drug addicts, no demonstrable sore being present. He considered the case reported to be one of tetanus and could not give the patient credit for being smart enough to simulate risus sardonicus. He thought that the patient would probably develop opisthotonos and die, as he had never seen an adult recover from such an attack, although he had seen several children get well.

Dr. E. L. Mueller had seen a case of anaphylaxis following the administration of tetanus antitoxin. The second case reported from Dr. Nesbit's service was that of a 17-year-old girl who was admitted to the hospital January 31, with a history of having been confined January 14, and that a pain in the lower part of the right chest had developed on the twentieth. The first blood count showed 25,500 w. b. c., and 86 per cent. polys. The second blood count, taken recently, showed 7,550 w. b. c.; 68 per cent. polys, and 50 per cent. hemoglobin. A catheterized specimen of urine showed a few pus cells from the right kidney. Nothing definite had been found by physical examination.

Dr. P. I. Nixon thought that in this case one should first consider puerperal infection. Septicemia could produce a localized pain in the right hypochondriac region due to a liver abscess, cholangitis, etc., or there could be a hematogenous infection of the kidney with pus appearing in the urine.

Dr. R. E. Bowen thought that a widal test should be done, and that in every such case one should suspect that an embolus had lodged in the liver, spleen, lungs, etc.

Dr. J. A. Watts stated that a study of the lymphatic drainage system of the abdomen and thorax would show that there was every reason for fearing pneumonia of the right lung, following abdominal operations. The case under discussion might be an embolic perinephritic abscess. He advised frequent urine examinations as pus might appear later.

Dr. Heck stated that while there were occasional pus cells in the urine, which the cystoscope showed came from the right kidney, the abdominal pain was anterior to the kidney.

Dr. I. T. Cutter thought that there was slight chance of the case being one of puerperal infection, as the uterus was well contracted and there was no abnormal lochia. He advised *x*-ray examination of the lung for evidence of tuberculosis and also examination of the blood for malarial parasites.

Dr. W. H. Hill thought that the case was probably one of an infected embolus involving the kidney and lung, since the condition came on rather late for puerperal infection. He also thought that endocarditis should be considered.

Dr. Heck reported the case of a Mexican woman aged 50 years, who entered the hospital complaining of pain in the left abdomen, which had been getting worse gradually for the past two years. During the last five months the pain had been worse at her menstrual periods, and she had noticed blood in the urine for several months. The examination revealed an emaciated woman, with a palpable mass in the left abdomen, which was connected with either the spleen or the kidney. The urine showed many blood and pus cells and the blood a secondary anemia. A catheter went to the right kidney very easily, but on the left side it encountered an obstruction. A large left kidney was found on operation, the malignant process extending down the ureter. Examination of the tumor showed a large hypernephroma. The patient died the next day.

Dr. Manning Venable stated that this class of cases was unsatisfactory, as the patients were usually past relief when they consulted a physician. The triad of symptoms, pain, tumor, and hematuria, usually spells hypernephroma. Kretchmer of Chicago, had recently reviewed 54 cases of hypernephroma that he had seen and mentioned the prevalence of this triad of symptoms. Dr. Venable had never seen a case with a palpable tumor that had recovered. *X*-ray therapy had not been shown to be of any curative value in hypernephroma, early surgery being the only hope. Since the first point of metastasis was often in the long bones or the lungs, radiograms should be taken before the operation is done, as with an already established metastasis operation, of course, was useless. He had recently seen a case in private practice in which the tumor had grown considerably in size and the patient was going down generally, having refused an operation two years previously.

Dr. M. J. Bliem reported the case of a patient who had complained several years of pruritis and excessive sweating. He complained of no pain or swelling in his side, although examination revealed an enormous tumor in the left side which was at first mistaken for an enlarged spleen and the diagnosis of splenic anemia made. There was no blood in the urine, but a catheter could not be passed up to the left kidney. The radiogram showed a kidney tumor which upon operation proved to be a large hypernephroma. The tumor was removed and the patient died the next day.

Dr. Stout stated that a section of the case reported by Dr. Heck showed malignancy. Histologically it was densely cellular and there were numerous mitotic figures and no cell differentiation. Although the classification of these kidney tumors changes from time to time, they are certainly malignant. Metastasis may occur from a very small area of involvement, while no metastasis may occur from a very large growth. One should always be very careful in making a prognosis in these cases.

Dr. O. J. Potthast stated that Dr. William Keiller of Galveston, had called attention to the value of inflating the colon, as with a tumor of the kidney this will give a tympanitic note in front of the spleen. He had seen Dr. Coffey of Portland, Oregon, operate a case last summer, in which there was hematuria and pain, but no mass. The catheter would pass up the left urethra only a short distance. Operation revealed a large hypernephroma, although there had been no palpable mass.

Dr. J. M. Venable reported the case of a woman, aged 54, who had entered the hospital on January 26, with the diagnosis of a floating kidney. Thirty years previously she had fallen on her right side from a horse and had suffered from pain in that side ever since. She had been told 8 years previous to entering the hospital that she had a floating kidney, and 3 weeks ago she had passed blood in the urine. Physical examination was negative except for a movable tumor in the right side. The cystoscope showed an inflamed bladder, and 40 cc. of solution could be injected into the right kidney pelvis without discomfort. Operation showed a floating kidney with an infection due to stagnation. Steps of the operation for suspending this kidney were described in detail and pictures of other kidney conditions were shown on the screen. The majority of these cases occurred in women and on the right side. The causes are acute or chronic trauma, the build of the patient, etc.

Dr. H. McC. Johnson stated that the case reported might have been one of an enormously dilated calyx. Some cases of floating kidney should be operated and some should not. With symptoms of hydronephritis the case is usually benefited by surgery. In most cases of floating kidney there is a general ptosis, so that even though the kidney is replaced, other organs may come down against it and produce the same symptoms as before. An operation in which the capsule is stripped from the kidney and gauze packs placed under it to produce adhesions, when followed by proper postoperative measures, usually gives results.

Dr. O. G. Potthast thought it was interesting to figure out the etiology of these cases. Since in most of these cases there is a general ptosis, simply replacing and stitching the kidney to the posterior wall is often unsuccessful unless followed by colopexy or omentocolopexy.

Dr. Heck thought that a picture of these patients should be taken in the standing position. He thought that the patient should be kept flat on the back following the operation, and that postoperative treatment was more important than any one thing.

Caldwell County Medical Society has elected the following officers for the ensuing year: President, Dr. T. B. Coopwood, Lockhart; vice-president, Dr. Keeton Alexander, McMahan; secretary-treasurer, Dr. J. M. Burks, Dale; censors, Drs. Edgar Smith of Luling and M. W. Pitts and H. B. Henry of Luling; member Public Health and Legislative Committee, Dr. A. A. Ross, Lockhart; delegate, Dr. Edgar Smith; alternate, Dr. M. W. Pitts.

Dallas County Medical Society met January 22, with 46 members present.

Dr. E. R. Carpenter presented the case of a colored boy with tower skull, upon whom he performed an operation removing a circular piece of bone from the skull, thereby relieving the pressure on the brain.

Dr. W. C. Browne reported the case of a lady forty-five years of age, suffering from rheumatoid arthritis, in which a sedative diathermy was producing good results.

Dr. G. B. Thaxton reported the case of a woman who had undergone a pan-hysterectomy eight years previously. A portion of the cervix had been left, and in this a focal infection had continued. This

portion of cervix was removed to get rid of the infection.

Dr. Geo. L. Carlisle read a paper on "A Report of Some Interesting Cases," which was discussed by Drs. Guy Witt and H. I. Gosline.

Dr. D. V. Myers read a paper on "Tuberculous Laryngitis," which was discussed by Drs. Marchman, Goggans, and Freed.

Drs. Speight Jenkins and A. A. Newsom were elected to membership.

Dallas County Medical Society met February 12, with 84 members present.

Dr. Harold Freed reported the case of a young man with pulmonary spirochetosis.

Dr. Howard Cecil reported the case of a young man with gonorrheal infection of the kidney.

Dr. J. H. Dorman read a paper on "Fractures," which was discussed by Drs. W. B. Carrell and B. L. Schoolfield.

Dr. F. A. Pierce read a paper on "Synergistic Anesthesia," which was discussed by Drs. Robertson, Duff and DeWitt Smith.

A committee was appointed to draw up resolutions concerning the death of Dr. Walter J. Crook.

The committee appointed to investigate the Booty School for Stammerers, reported favorably, and the society moved that Mr. Booty be commended for his efforts in behalf of stammerers.

Drs. J. D. O'Brien, J. P. Evans and P. A. Rogers were elected to membership on application. Dr. P. H. Duff was elected to membership on transfer from the Massachusetts Medical Society.

El Paso County Medical Society met January 19, 1925, with 38 members and 3 visitors present.

Dr. W. M. Branch showed a case of leprosy of about four years' duration, in a Mexican man 50 years of age. There was no involvement below the neck in this case. About a year and a half ago, Dr. Geo. Turner had made sections from this case, in which he found the lepro-bacilli, but he found none in the nasal secretions.

Dr. Geo. Turner read a paper reporting "Fifty Cases of Hay-Fever Treated with Local Pollens." A large number of these cases had been entirely relieved, others have been benefited, while about 20 per cent had shown no improvement. Dr. Turner stated that each case should first have a nose and throat examination, in order to rule out infections before pollen sensitization is begun. This case was discussed by Drs. Werley, Davis, and Leigh.

Dr. W. R. Jamieson read a paper on "Stricture of the Ureter." He illustrated his paper with a number of lantern slides made from pyelograms. This paper was discussed by Drs. K. D. Lynch and T. R. Outlaw.

Dr. W. W. White showed a pathological specimen consisting of a heart and the large vessels, in which a large cardiac infarct extended into the large vessels and coronary arteries. The only history of this case that could be obtained, was that the man had been found dead in bed.

Dr. Orville Egbert was appointed chairman of a committee to make arrangements for the meeting of the Southwest Medical Association to be held in El Paso at a date to be announced later.

El Paso County Medical Society met January 26, 1925, with 24 members and 3 visitors present.

Dr. Andreas Villereal showed a case of aneurism of the outer portion of the subclavian artery and paralysis of the left arm, which resulted from a gunshot wound sustained about four months previously. Dr. Villereal stated that he proposed to ligate the artery, and later remove the aneurism and do a suture of the nerve.

Drs. W. L. and C. P. Brown reported a case of a rare tumor—probably a hypernephroma of primary origin, occurring outside of the kidney. This case report will be published later in the JOURNAL.

Dr. Werley reported the case of a patient suffering from mitral stenosis with dilatation, who had developed gangrene of the left leg, and amputation was performed under spinal anesthesia. The patient later developed gangrene of the other leg and died. Dr. Werley exhibited the heart and large vessels from this case, all of the chambers of the heart being full of blood clot which extended into all the vessels and the cononary arteries. The oldest portion of the clot was in the left ventricle. Dr. Werley also exhibited the specimen of a heart and large vessels, which showed a rupture of the musculature of the left ventricle, extending almost into the right ventricle. The rupture was packed with blood clots and there were antemortem blood clots in the heart and pulmonary artery.

Dr. James Vance reported the case of a brain tumor in a man fifty-four years of age. The symptoms in this case had begun two and a half years previously. The specimen of the brain, which Dr. Vance exhibited, showed a tumor of about the size and shape of a small pear, located in front of the Island of Reil. This tumor probably originated from the choroid plexus.

El Paso County Medical Society met February 2, at the University Club.

Dr. W. E. Johnson read a paper on "Intracranial Birth Injuries." The subject was very thoroughly covered with reference to causes and diagnosis, and suggestions for treatment in those cases in which it is indicated. These cases often pass undiagnosed if careful examinations have not been made. They should be studied by the surgeons and operative procedures when indicated should not be postponed until too late for relief.

Dr. K. D. Lynch read a paper on "Tuberculosis of the Kidney." Dr. Lynch's paper presented a very exhaustive study of this condition. It was discussed by Drs. W. R. Brown, Jamieson, W. W. Waite, F. D. Garrett, G. Werley, J. W. Laws and O. Egbert.

Dr. P. R. Cassellas reported two cases of trigeminal neuralgia treated very successfully by diathermy.

The society went on record as being opposed to the passage of any further laws complicating the prescription of alcoholic liquors by physicians.

El Paso County Medical Society met February 16, at the University Club.

Dr. E. C. Prentis read a paper on "Secretin, Physiological Action and Therapeutic Indication," which was discussed by Drs. Leigh and Waite.

Dr. F. P. Schuster described the Haslinger directoscope, enumerating its advantages over other types of instruments of this kind.

Dr. Morgan, of Chicago, made some general remarks about anesthesia. The latest development in the field of anesthesia is the use of CO_2 and O_2. Dr. Morgan is of the opinion that CO_2 should be used in all cases of anesthesia to keep up a high CO_2 content in the blood and to stimulate the respiratory center.

Dr. Lucian E. Smith, a medical missionary, who has spent seven years in Africa, was a guest of the society. He made a very interesting talk about the customs and conditions in Africa and his experiences there as a medical missionary. Dr. Smith illustrated his talk with a series of lantern slides showing a number of cases before and after operation.

El Paso County Medical Society met February 23, at the University Club. This meeting was devoted entirely to reports of clinical cases.

Dr. James Vance reported a case of osteitis in the left tibia of a young girl 18 years of age, a case of strangulated inguinal hernia in a woman 84 years

of age, and another case of strangulated femoral hernia in a woman of 64.

Drs. W. L. Brown and C. P. Brown reported a case of fracture of the skull, resulting from an automobile accident. The contraindications for operation in this case were brought out very thoroughly. The patient died 36 hours later, without regaining consciousness and postmortem examination confirmed Dr. Brown's opinion in this case.

Dr. E. J. Cummins reported four cases of septicemia treated with mercurochrome 220 and gentian violet. Dr. Cummins does not report favorable results from this method of treatment.

Dr. P. R. Casellas showed a very interesting series of slides of conditions diagnosed by *x*-ray pictures. These included diverticula of the stomach, stones in the kidney and ureter, hydronephrosis, hypernephroma, encapsulated empyema, fracture of the femur in a six months' old baby, Brodie's abscess, arteriosclerosis of the vertebral artery, and recurrent carcinoma of the lungs, following carcinoma of the breast which was removed five years previously.

Dr. G. Werley reported four cases of rheumatism following influenza.

Hale-Floyd-Briscoe-Swisher County Medical Society met February 10, at which time the following officers were elected for the ensuing year: President, Dr. C. C. Gidney, Plainview; vice-president, Dr. S. M. Henry, Lockney; secretary-treasurer, Dr. E. F. McClendon, Plainview; censor, Dr. E. Lee Dye, Plainview; delegate, Dr. E. O. Nichols, Plainview; alternate, Dr. J. C. Anderson, Plainview.

Harris County Medical Society met February 7, with 52 members present.

Dr. John B. Legnard read a paper on "Continuous Irrigation in the Treatment of Pyelitis," which was discussed by Drs. B. W. Turner, J. M. Trible and J. H. Turner.

Dr. W. Lapat reported "A Timely Clinical Case." He had opened a purulent ear under local anesthesia, and the operation was promptly followed by a mastoid infection. This was the second case of this kind in his experience. He stated that in the future he did not expect to use the local anesthetic in such a case.

Dr. E. W. Appleby reported "A Case of Encephalitic Parkinsonian Syndrome," which was discussed by Drs. R. M. Hargrove, H. L. D. Kirkham, S. D. David and A. V. Goetz.

Dr. W. M. Brumby read a paper on "Periodic Health Examinations," which was discussed by Drs. H. L. D. Kirkham, C. U. Patterson, W. Lapat, L. J. Spivak, E. L. Goar, R. M. Hargrove and S. A. Foote.

Harris County Medical Society met February 14 with 112 physicians and dentists present. This meeting was a joint meeting of the Harris County Medical Society and the Houston Dental Association.

Dr. W. H. Scherer read a paper on "Peridontoclosia."

Dr. C. C. Cody read a paper on "The Inter-relation of the Ear, Nose and Throat to Oral Sepsis."

Dr. Ralph C. Cooley read a paper on "Reparative and Reconstructive Dentistry in Relation to Systemic Disease."

Dr. Joseph Mullen read a paper on "With Particular Reference to Periapical Areas of the Teeth."

Dr. B. F. Smith read a paper on "Inter-relation of Systemic Disease of Oral Sepsis." This symposium of papers was discussed by Drs. J. E. Hodges, J. H. Turner, Wm. Strozier, Wm. Lapat, L. Daily, G. M. Platt, Frank Barnes, F. M. Night and Frank B. King. Discussions closed by Doctors T. W. Scherer, C. C. Cody, R. C. Cooley, R. T. Morris and Smith.

Harris County Medical Society met February 21, with 61 members present.

Dr. Abe Alexander of Galveston reported "A Case Primary Carcinoma and Syphilis Occurring in the Same Lung," which was discussed by Drs. M. D. Levy, W. H. Ross, Martha Wood, A. H. Braden and Sidney Israel of Houston, and Dr. Henry Hartman of Galveston.

Dr. F. A. Wapples read a paper on "Some Practical Diets," which was discussed by Drs. J. H. Turner, Jas. Agnew, W. Lapat, P. H. Scardino, C. U. Patterson and J. E. Hodges.

Knox-Haskell County Medical Society has elected the following officers for the ensuing year: President, Dr. E. F. Heard, Goree; vice-president, Dr. T. S. Edwards, Knox City; secretary-treasurer, Dr. T. P. Frizzell, Knox City; delegate, Dr. A. A. Smith, Munday; alternate, Dr. T. S. Edwards.

McLennan County Medical Society met February 10, 1925.

Dr. W. C. Bidlespach read a paper on "Influenza and Its Clinical Manifestations."

Dr. H. T. Ainsworth read a paper on "Sinus and Ear Complications in Influenza."

Case reports were made by Dr. H. J. Germany on "A Case of Obstetrics Complicated by Influenza and Nephritis," and by Dr. Paul C. Murphy on the "Use of Magnesium Sulphate with Morphine in Labor," three cases being reported.

Mitchell County Medical Society met February 5, at which time the following officers were elected for the ensuing year: President, Dr. T. A. Martin, Loraine; vice-president, Dr. T. H. Barber, Colorado; secretary-treasurer, Dr. T. J. Ratliff, Colorado; censors, Drs. P. C. Coleman and C. L. Root of Colorado, and W. L. Hester of Loraine; delegate, Dr. T. A. Martin; alternate, Dr. T. J. Ratliff.

Tarrant County Medical Society met February 3, with about forty members present.

Dr. J. H. Sewell, in discussing diseases of the heart, presented two very interesting cases. One, a negro man, 48 years old, gave the usual symptoms and signs of heart disease, such as indigestion for four years, dyspnea for two months, distinct murmurs over all valvular areas, etc., but with only slight cardiac enlargement. The second case was that of a white man, about 35 years old, with a primary nephritis of several months standing, and a marked anemia, but whose heart was not enlarged. The only cardiac sign was that of a musical murmur at the P. M. I. Dr. Sewell stressed the lack of importance attaching to murmurs of the heart as a rule, in determining the prognosis of a case of heart disease.

Dr. I. C. Chase next discussed "Blood-Pressure in Health, and its Pathological Variations, With Especial Reference to Angina Pectoris." He asked for a more thorough study of patient's blood-pressure by the profession in general, and stressed the importance of prevention of this condition by early removal of sources of toxemia in the body, whether they be focal infections or what not.

Dr. McVeigh read a paper on the diseases of the arteries, giving the normal histological structures of the arteries and their change in pathological conditions, and emphasizing the nervous control over these structures.

The general discussion which followed was opened by Dr. Barrier, who showed many interesting slides, electrocardiograms, demonstrating the differences of each individual heart, even in health, and its value in diagnosis of diseased conditions. He was followed by Drs. Potts, Hawkins, Barcus, Horn, Gilmore, and Terrell, and the discussion was closed by Dr. Sewell.

A communication from the American Medical Association concerning the broadcasting each month of news items from *Hygeia* was read, and a committee

appointed to approach the *Star-Telegram* and arrange the matter if possible.

Tarrant County Medical Society met February 17, 1925.

Resolutions on the death of Dr. West were read and approved by a unanimous rising vote of the society.

Dr. Edwards, visitor from the local dentists' society gave a very interesting discussion on "The Mouth as an Etiological Factor in Diseases of the Cardiovascular System." He stressed the fact that this subject was more in the sphere of the physician, and that the dentist merely followed out the orders of the physician, but that his experience and observation showed him that many constitutional diseases have their origin in focal infections in or around the teeth. He cited many instances where removal of dead teeth, which may or may not have shown evidence of infection in the *x*-ray pictures, were often followed by phenomenal results on removal of said teeth.

Dr. White next read a very interesting paper on "Surgery of the Cardiovascular System," in which he made a very complete resume of the subject, citing such operations as resection of the entire left sympathetic chain in the neck, as well as the left superior ganglion of the thoracic chain, which gave relief in the majority of cases reported. He also mentioned an operation performed by Elliot Cutler of Boston, for bloodless intracardial valve cutting. He reported good results on four cases of advanced mitral stenosis which were seemingly hopeless before operation. He also mentioned the suturing of wounds in the heart wall, and other operations in and around the heart for such conditions as suppurative pericarditis. The heart was usually exposed by resecting the fourth and fifth costal cartilages guarding the internal mammary artery from injury, and avoiding opening the pleura, the incision being made into the pericardium.

Persistent dakinization and aspiration of the exudates was found of value in the after treatment. He mentioned septic thrombosis as offering opportunity for surgical treatment, its most frequent occurrence being in the lateral sinus following mastoid disease. This condition treated by ligation of the internal jugular vein, and evacuation of the clot. Arteriosclerotic gangrene was discussed, and if palliative measures failed to check the progress, high amputation was advised. Diabetic gangrene may now be handled surgically with success, due to the discovery and use of insulin. Portal obstruction in advanced stages offers chance for successful operation by scarifying and bringing a large area of the liver and omentum into contact with the parietes, thereby shunting some of the portal blood through the new formed anastomosis. Mesenteric thrombosis, aneurysm and elephantiasis were also discussed.

The operation of lymphacostomy in cases of peritonitis was discussed, the operation consisting of incision of the thoracic duct at its junction with the innominate vein in the neck. Costain of Toronto, and Edwards of Barabo, Wisconsin, report results from this operation.

Dr. J. V. Anderson was elected to membership.

The president announced that special meetings will be set aside for reading of papers which are to be read at the State Association meeting, and asked that all such papers be presented as soon as possible so as to not interfere with the regular program.

Titus County Medical Society met at Mount Pleasant, December 9, at which time the following officers were elected for 1925: President, Dr. S. R. Crabtree, Mount Pleasant; vice-president, Dr. A. A. Smith, Talco; secretary-treasurer, Dr. T. S. Grissom, Mount Pleasant; censors, Drs. A. A. Smith, J. M. Ellis, Mount Pleasant, and W. A. Taylor, Mount Pleasant; delegate, Dr. S. C. Broadstreet, Mount Pleasant; alternate, Dr. T. R. Bassett, Mount Pleasant.

Titus County Medical Society met at Mount Pleasant, January 13, with the following members in attendance: Drs. J. S. Taylor, T. R. Bassett, S. C. Broadstreet, J. M. Ellis, W. A. Taylor and T. S. Grissom.

Upon motion, the dentists of the county were given honorary membership in the county medical society.

The president and secretary of the society were appointed as program committee of the society for the ensuing year.

Titus County Medical Society met at Mount Pleasant, February 10, with 8 members present.

Dr. J. S. Taylor presented a patient who had suffered from an infection in the hand, resulting in considerable destruction of tissue in the arm.

Dr. T. R. Bassett read a paper on "Gonorrhea," which was freely discussed.

Dr. S. C. Broadsteet read an interesting article from the *Southern Medical Journal* entitled, "Shall America Remain White?"

Wood County Medical Society met January 31, at which time the following officers were elected for 1925: President, Dr. W. T. Black, Quitman; vice-president, Dr. J. B. Goldsmith, Quitman; secretary-treasurer, Dr. V. E. Robbins, Quitman (re-elected); delegate, Dr. R. H. Coleman, Mineola; alternate, Dr. V. E. Robbins; censors, Drs. R. H. Coleman, T. H. Peterson and J. M. Puckett, all of Mineola.

South Texas District Medical Association Meeting.—The following letter has been received from the president of the above Medical Association:

To the Editor:—

We have about completed the arrangements and program for the South Texas District Medical Association which meets in Beaumont, April 9 and 10. In addition to many excellent papers by Texas men, there will appear before the Association one of the most prominent surgeons of the south, Dr. Rudolph Matas, professor of surgery of Tulane University; and one of the most prominent surgeons in the northwest, Dr. W. E. Sistrunk, of the surgical section of Mayo Brothers, Rochester, Minn.

I feel that the Association and the State should take it as a compliment that two such prominent men as I have just mentioned have accepted our invitation to come to the State and read papers before this Association. These papers will be of great benefit to all of us and as president of the South Texas District Medical Association, I wish to take this occasion to extend an invitation to the entire medical profession of the State of Texas to meet with us in Beaumont, April 9 and 10. I am sure that their visit will be well worth their while, and that their presence at the meeting would be a means of stimulating an interest in our society which is already doing some of the best work of any society in the State.

C. C. GREEN, President.

CHANGES OF ADDRESS.

Dr. J. A. McKay, from Denton to Madisonville.
Dr. H. N. Lusk, from Ralls to Bartlett.
Dr. W. E. Redford, from Boyd to Plainview.
Dr. E. L. Rose, from Palestine to Port Arthur.
Dr. W. R. Kelly, from Deweyville to Jasper.
Dr. H. L. Edens, from Bertram to Lampasas.
Dr. W. D. Herring, from Blooming Grove to Dallas.
Dr. F. E. Glauner, from San Antonio to McAllen.
Dr. S. D. Swope, from El Paso to Chihuahua, Mexico.

Dr. R. E. DeWitt, from Cooper to Dallas.
Dr. Sterling Price, from Burkett to Bradshaw.
Dr. G. C. Wood, from Breckenridge to San Angelo.
Dr. D. A. Dinwiddie, from Clarksville to Texarkana.
Dr. N. J. Smith, from Hamlin to Anson.
Dr. L. Faulk, from Alba to Sulphur Springs.
Dr. J. G. Springer from San Antonio to Austin.

DEATHS

Dr. James Bell Hester died February 13, 1925, at William Beaumont Hospital, El Paso, Texas.

Dr. Hester was born January 27, 1887, at Buffalo, Texas. He received his preliminary education in the schools of Marlin, Texas, and took his degree in medicine from the Medical Department of Texas Christian

DR. JAMES B. HESTER.

University, Fort Worth, Texas, in 1917. He was commissioned First Lieutenant in the Medical Corps of the Army and stationed at Camp McArthur, Texas. He married Dr. Nell Carney in 1919.

Dr. Hester was a Mason, and a member of the Presbyterian Church. He had been in rather poor health ever since his discharge from the army in 1919, and died from an attack of apoplexy.

Dr. Hester had been a faithful member, first of Tarrant County, then of Hill and Leon County Medical Societies, and of the State Medical Association ever since he took his degree in Medicine. He will be greatly missed from the ranks of the medical profession, and by his many warm friends. He is survived by his wife, Dr. Nell M. Hester, of Buffalo, Texas.

Dr. J. B. J. Gilliam of Italy, Texas, died at his home, December 11, 1924.

Dr. Gilliam was born near Gallatin, Tennessee, September 20, 1849, and received his early education in the common schools of that community. He was married to Miss Bettie Jennings of La Guardo, Tennessee, October 11, 1877, and the following year received his degree in medicine from Vanderbilt University. He practiced a short while in his native state and then came to Texas. He practiced two years in Iowa Park, Texas, and two years at Edna, later going to Milford, where he practiced for nineteen years, and from which place he moved to Italy, Texas, where he lived until his death.

Dr. Gilliam had been an active member of the Baptist Church for many years, and was also a member of the Knights of Pythias Lodge. He is survived by his wife, one daughter, Mrs. H. C. Martin, and one son, Horace, all of Italy, Texas.

Dr. Wm. Madison Gipson of Lytle, Texas, died at his home, December 13, 1924.

Dr. Gipson was born July 3, 1874, at Daniels, Mississippi. He received his degree in medicine from the Memphis Hospital Medical College, in 1896, and in 1898 did postgraduate work in that college. He began practicing at Daniels, Mississippi, moving later to Braxton, Mississippi. In 1912, he went to Poteet, Texas, and from there to Hondo, where he practiced until 1920, at which time he moved to Lytle, Texas, where he continued to practice until his death.

Dr. Gipson had been a member of his county medical society and the State Medical Association for a number of years. He is survived by his wife and several children.

Dr. Byron F. Kingsley died at his home in San Antonio, February 1, 1925.

He was born at Ripley, New York, July 11, 1852. He received his degrees in medicine from the Detroit School of Medicine, Detroit, Michigan, and from the Long Island College Hosptal in 1874. He served as surgeon in the United States army from 1879 to 1893. It is said that Dr. Kingsley came to San

DR. BYRON F. KINGSLEY.

Antonio on the first passenger train which entered that city. He had practiced medicine for fifty years, most of that time in San Antonio, retiring from active practice last September.

Dr. Kingsley had always been an active member of the profession, having served as vice-president of the State Medical Association, and having held

many important offices in Bexar County Medical Society. He was also a prominent member of the American Medical Association, a Fellow of the American College of Surgeons, a member of the '52 Club, and had served as president of the West Texas Medical Association and of Bexar County and the Texas Humane Societies. He was at one time president of the United States Board of Pension Examiners. He was an active member of the State Historical Association, of the Knights of Pythias, a life member of the Elks, and a member of the International Club.

A glowing tribute to the life and character of Dr. Kingsley was paid in resolutions adopted by the Bexar County Medical Society. In him the society has lost one of its most valued members, and the community one of its most public-spirited and capable citizens.

In 1892 Dr. Kingsley married Miss Nellie Gelnnon of Chicago, by whom he is survived, together with two sons, G. M. Kingsley, of Tampico, Mexico, and R. W. Kingsley, of Kerrville, and two brothers, C. C. Kingsley of Pleasanton, and C. M. Kingsley of San Antonio.

Dr. Jasper D. Phillips died at his home in Tyler, Texas, December 18, 1924.

He was born in Pine Hill, Rusk County, Texas, in 1856. He took his degree in medicine from Tulane University in 1881, and began practicing in Edom, Texas, later moving to Georgetown and from there to Tyler, at which latter place he had practiced for the past twenty-five years. He was an active member of Smith County Medical Society and of the State Medical Association for many years and had held many positions of honor and trust in both. He was a devoted member of the Methodist Church and was always active in civic affairs. At the time of his death, he was president of the Irion Drug Company, and a director in the People's Guaranty State Bank.

A friend said of Dr. Philips, "In his chosen profession he was greatest. He had the genius of the 'born physician' and in addition to his splendid mentality was thoroughly equipped and posted * * * * What a blessing and boon he was and how he honored his God and adorned his profession, and how skillfully, tirelessly and faithfully he served his fellow-man!"

Dr. Phillips married Miss Florence Longmire of Pine Hill in 1879, and she together with four daughters, Mrs. C. L. Alexander, Mrs. S. F. Morris, and Mrs. Floyd Pinkard of Tyler, and Mrs. E. H. Crim of Wills Point, survive him.

BOOK NOTES

Life Insurance Examination. Edited by Frank W. Foxworthy, Ph. B., M. D., Indianapolis, Indiana. Formerly President of the American Association of Medical Examiners; at present on Staff Methodist Episcopal Hospital and City Hospital; Associate Editor *Medical Insurance;* for many years Medical Director, Medical Referee and Medical Examiner. 8vo. Cloth, 738 pages, 156 illustrations. Price $9.00 net. C. V. Mosby Company, St. Louis, Mo., 1924.

This very complete work on Life Insurance examinations is the result of the combined efforts of 50 of the most prominent life insurance examiners in America. The list of contributors is too long to enumerate in this limited space, but it is noted that it includes our own Dr. J. H. Florence of Houston, who wrote the chapter on "Life Insurance Examination in the South." The book first takes up a brief history of life insurance examinations, and then discusses, at first in general terms, the methods of examination, the organization of the medical department, and the duties of the Medical Director, the Medical Referee, and the Medical Examiner. The etiquette of medical insurance is discussed and a special chapter is devoted to the examination of women. Following this are chapters dealing with the examination of special organs and regions of the body. The importance of all necessary laboratory procedure is discussed. Next is taken up the special hazards incident to certain occupations, such as, those who work in the tropics, or who are in the Army and Navy. A chapter is devoted to examinations for health and accident insurance, and another very comprehensive chapter deals with the legal aspects of life insurance examinations. The work concludes with a chapter by the Editor on "Postponement in Disease." The Editor states that "this compilation was made many years ago * * * and revised from year to year with the assistance of many of the leading specialists and insurance experts in this country." This volume should prove invaluable to the life insurance examiner, whether he is devoting his whole time to this special field of medical endeavor, or is doing considerable examining for life insurance companies, in addition to his practice.

Medical Biometry and Statistics, by Raymond Pearl, Professor of Biometry and Vital Statistics in the School of Hygiene and Public Health, and of Biology in the Medical School, The Johns Hopkins University. 8vo, Cloth, 380 pages, Illustrated. Price $5.00 net. W. B. Saunders Company, Philadelphia and London.

This rather unusual work undertakes to apply the science of vital statistics to the study of medicine. A brief history of vital statistics is given and the use of biometric measurements in this connection is explained. The methods of computing statistics and their graphical representation are discussed in detail. The theory of probability is gone into thoroughly. The book is profusely illustrated with graphs, charts, and tables of statistics. Common errors in the graphical representation of statistical data are explained, and also the methods by which these errors may be avoided. To one interested in the study and compilation of statistics, either medical or general, this work should be exceedingly valuable.

Gonorrhoea. By David Thompson, O. B. E., M. B., Ch. B. (Edin.), D. P. H. (Camb.). Contributions by Davie Lees, D. S. O., M. D., F. R. C. S. E.; Claude H. Mills, M. R. C. S. (Eng.), L. R. C. P. (Lond.); Robert Thomson, M. B., Ch. B. (Edin.), and Kenneth Maclachlan, M. B., Ch. B. (Edin.). Royal 8vo. Cloth, 519 pages, 2 colored plates, 19 plates in black and white, and 22 black and white illustrations. Price $12.75 net. Oxford University Press, American Branch, 35 West Thirty-second Street, New York City.

This volume is one of the most comprehensive and thorough treatises on the subject of gonorrhoea, that we have seen. The author states in his preface that he had originally intended to write a "series of papers dealing with the bacteriology of the disease," but after three years of intensive investigation and labor, he had accumulated so much material "that it became necessary to bring all the information together in book form." After three more years of work, parts one, two, three and four were completed. A careful examination of the book will reveal that all this time of preparation was well spent. The work is divided into six parts, as follows: Part I deals with The Bacteriology of Gonorrhoea; Part II, The Anatomy, Pathology, Morbid Histology, and Cytology of Gonorrhoea, and the Clinical Pathology

of Local and Systemic Infections, while Part III discusses the Problems of Immunity and the Complement-Fixation Test. Part IV describes Vaccine Therapy, Serum Therapy, Chemical Therapy, Electro and Thermo-Therapy. It is interesting to note that Kenneth Maclachlan believes in the potency of Vaccine Therapy, especially in the treatment of gonorrhoeal complications, while the author contends that Serum Therapy is of little value in the treatment of the disease. The Council on Pharmacy and Chemistry of the A. M. A. recently dropped both gonococcal vaccines and serums from "New and Nonofficial Remedies," as not having been shown to be of any real value in the treatment of gonorrhoea. The author gives quite extensive statistics in support of his view on this subject, but the same criticism applies to these statistics as applies to statistics on the value of other remedies in diseases that have a tendency to self-limitation. Part V discusses "Prophylaxis and Abortive Treatment." The author shows the same rare judgment and conservatism that he displays throughout the volume in his conclusions concerning the advisability of teaching venereal prophylaxis to the lay public when he concludes, "Are we to believe that by refusing to bring into full daylight the crime of ignorance and uncleanliness, we shall diminish the crime of immorality? The author has sufficient faith in the common sense and decency of the average individual in this country to believe that a thorough and full propaganda on these subjects would not lower the moral standards of the community." Part VI is devoted to "The Clinical Manifestations and the Practical Modern Treatment of Gonorrhoea." In this section the value of the urethroscope and the cystoscope is stressed. In the treatment of the disease and its numerous complications, the best thought of America, France and Germany is considered, as well as the methods adopted in England in combating the contagion. The binding and typographical work is excellent and the many illustrations are artistic and well executed.

Goiter, Nonsurgical Types and Treatment. By Israel Bram, M. D., Instructor in Clinical Medicine, Jefferson Medical College, Philadelphia, Pa. 8vo. Cloth, 479 pages. Profusely illustrated. Price $6.50 net. The Macmillan Company, Publishers, New York City, 1924.

In this work the author has handled an extremely difficult subject in a very masterly and scholarly manner. His conclusions are based on an unusual opportunity for observation of goiter cases, as well as an intimate knowledge of the literature on the subject. This book is very clearly intended as a protest against the indiscriminate employment of thyroidectomy in goiter cases. The following quotation from the preface sums up the author's attitude fairly well: "Practically all goiters are regarded in these works as requiring surgical intervention; and when other measures are mentioned, they are dismissed with a literal wave of the hand, indicating that, whatever else might be tried, surgery will eventually be resorted to. That this is an unjust attitude is obvious when we observe that (1) goiter is preventable; (2) all early goiters are curable; (3) thyroidectomy is a failure in a large percentage of cases operated upon, and (4) a large percentage of goiters surgically treated are perfectly amenable to nonoperative procedures." The book is divided into twenty-eight chapters. The first four chapters are devoted to the anatomy, physiology, classification and pathology of goiter. Chapter V deals with Endemic Simple Goiter; Chapter VI with Simple Nonsurgical Goiter, and Chapter VII with Puberty Hyperplasia. The remaining chapters, comprising more than three-fourths of the book, discuss the perplexing problems connected with the etiology, clinical manifestations, and treatment of exophthalmic goiter. All of the principal theories concerning the etiology of this troublesome condition are discussed in detail. One is impressed with the wonderful grasp of the subject displayed by the author in his evaluation of the numerous theories proposed to account for the occurrence of exophthalmic goiter. This section of the book concludes with 20 illustrated case reports, followed by the author's conclusions and by quotations from a large number of the leading authorities on the diseases of the thyroid gland. Every chapter is followed by a very complete bibliography.

Pathological Technique. A Practical Manual for Workers in Pathological Histology and Bacteriology, including directions for the performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By Frank B. Mallory, A. M., M. D., Pathologist to the Boston City Hospital, and James Homer Wright, A. M., M. D., S. D. Pathologist to the Massachusetts General Hospital; Asst. Professor of Pathology, Harvard Medical School. Eighth Edition, revised and enlarged. 8vo. Cloth, 666 pages, 180 illustrations. Price $6.50 net. W. B. Saunders Company, Philadelphia and London. 1924.

This work on Pathological Technique has become one of the classics of medical literature. The main divisions of the book are as follows: Histological Methods; Culture-Media; Culture Methods; Microscopical Examination of Bacteria; Pathogenic Bacteria and Fungi; Animal Parasites; The Blood; Serological Technique; Post-Mortem Examinations, and Addenda. Although written in a concise and at times diagrammatic style, the directions for the preparation of various tissues, stains and culture-media are readily understandable. The chapter on Post-Mortem Examinations is especially valuable. All practicing physicians should familiarize themselves with at least the general principles involved in the intelligent performance of an autopsy. The author's work has been thoroughly revised so as to include all the latest Pathological Technique.

Chronic Intestinal Stasis, A Radiological Study. By Alfred C. Jordan, C. B. E., M. D. (Camb.), M. R. C. P. (Lond.), Corresponding Foreign Member, Belgian Royal Academy of Medicine. Royal 8vo. Cloth, 230 pages. Profusely illustrated. Price $7.50 net. Oxford University Press, American Branch, 35 West Thirty-Second Street, New York City.

This interesting work is divided into twenty-two chapters, as follows: The Causes of Chronic Intestinal Stasis; Clinical Manifestations of Chronic Intestinal Stasis; Changes in the Glands and Tissues; The Opaque Meal; The Large Intestine in Chronic Intestinal Stasis; The Pelvic Colon in Stasis; The Peristalsis of the Large Intestine; Colitis; Diverticultis; The Ileal Kink (Lane's Kink); Ileal Torsion; The Undescended Caecum; The Appendix; The Duodenum in Stasis and Duodenal Ulcer; Gastric Ulcer; The Oesophagus; Cardiospasm; Glycosuria in Chronic Intestinal Stasis; The Treatment of Chronic Intestinal Stasis; Stasis and the Prevention of Cancer; The Treatment of Chronic Intestinal Stasis by Colloidal Kaolin; The Author's Apparatus. The text is supplemented by numerous excellent röentgenograms. These illustrations are in fact so complete that without the well written and very interesting text, the reader could gain a very good idea of Chronic Intestinal Stasis. The illustrations showing the author's *x*-ray equipment lead one to wonder at the excellence of his work. However, it is the mechanical perfection of an instrument and not a showy display of brass rods, knobs, calibrated dials and

gaudy trappings that is really worth while. It does seem, however, that the röentgenologists in England are rather behind this country in the perfection of x-ray equipment, if the equipment that the author uses is a fair example of that employed by them. This volume is a valuable contribution to the literature on the subject of gastroenterology.

Diabetic Manual, for the Mutual Use of Doctor and Patient. By Elliott P. Joslin, M. D., Clinical Professor of Medicine, Harvard Medical School; Consulting Physician, Boston City Hospital; Physician to New England Deaconess Hospital. Third Edition, thoroughly revised. Illustrated, 12mo. Cloth, 212 pages. Lea & Febiger, Philadeplphia and New York, 1924.

This well known little volume on the treatment of diabetes, has been thoroughly revised to include the latest knowledge of diabetic therapy. As stated in the subtitle, the book is intended as a manual for both the physician and the patient, hence it is written in terms that the laity can readily understand. The importance of thoroughly acquainting the diabetic patient with the character of his disease, the complications that may be expected, and the plan and purpose of treatment is emphasized throughout the book. The composition of various common foodstuffs is given, and also methods for estimating roughly the amount of each of the three great classes of food that the common articles of diet contain. The importance of exercise is also clearly shown. The concluding chapters of the book contain many dietetic suggestions, recipes and menus, also tables of composition of foods and, "Selected Laboratory Tests Useful in Diabetic Treatment." If both patient and physician would take the time to thoughtfully consider this manual, both would be benefited thereby.

Diabetes, A Handbood for Physicians and Their Patients. By Philip Horowitz, M. D. Second Edition, Revised and Enlarged. 12mo., cloth, 220 pages, 34 illustrations, and 2 colored plates. Price $2.00 net. Paul B. Hoeber, Inc., Publishers, New York City.

This little volume is divided into eleven chapters, as follows: General Considerations; Insulin; Mild Diabetes; Moderately Severe Diabetes; Severe Diabetes; Acidosis and Coma; Complications; Hypoglycemia; Hygiene and Exercise; Menus, Recipes and Tables; Tests. There is an appendix containing a brief history of diabetes mellitus, and also tables of weights and equivalents. The book is given a personal touch by illustrating the treatment of different types of diabetes through an outline of the treatment of individual cases. The course of each case is followed in detail, the exact diet and caloric values being given.

Management of Diabetes, Treatment by Dietary Regulation and the Use of Insulin. A Manual for Physicians and Nurses based on the course of instruction given at the Presbyterian Hospital, New York. By Geo. A. Harrop, Jr. M. D., Associate in Medicine, College of Physicians and Surgeons, Columbia University; Medical Director, Presbyterian Hospital, New York. Introduction by Walter W. Palmer, M. D., Bard Professor of Medicine, College of Physicians and Surgeons, Columbia University; Medical Director, Presbyterian Hospital, New York. 12mo. Cloth, 190 pages. Price $2.00 net. Paul B. Hoeber, Inc., Publishers, New York City.

The book first takes up normal metabolism and explains the metabolic derangement in diabetes. The effect of insulin in the treatment of diabetes is briefly discussed. Next the treatment of diabetes is described in detail, giving the technique employed in the insulin treatment and describing the dangers attendant upon this treatment, and how such situations are met. The diet for the diabetic is gone into thoroughly and many useful recipes and tables of food values are included. The work concludes with a valuable chapter on "Methods of Blood and Urine Analysis of Importance in the Management of Diabetes."

Dislocations and Joint Fractures. By Frederic J. Cotton, A. M., M. D., F. A. C. S., Visiting Surgeon to the Boston City Hospital; Associate in Surgery, Harvard Medical School. Second Edition, Reset. 8vo., Cloth. 746 pages, 1393 Illustrations from Drawings by the Author. Price $10.00 net. W. B. Saunders Company, Philadelphia and London, 1924.

The author states in the preface that he has endeavored to make this book a personal document which was the aim, also, in the first edition. He states, "I have tried to keep the lines restricted, but for the most part, the data still remain as before; cases that I have seen, or have some direct knowledge of." The author shows himself to be quite an artist as well as an orthopaedist, as the great majority of the unusually large number of fine illustrations contained in the book are from the author's own pen and brush. The first chapter of the book is devoted to a general consideration of fractures and dislocations; the succeeding chapters take up the fractures and dislocations regionally. The style is clear and concise, often to the point of terseness. The author's experience has enabled him to write authoritatively and from personal observation. The reader is not burdened with fine-spun theories nor obsolete methods of treatment. The latest methods of treatment of fractures and dislocations are explained, and the various mechanical devises which proved useful in that great school of surgery, the World War, are carefully described. It is believed that this work of Dr. Cotton's will come to be regarded as one of the classics in orthopaedic surgery.

International Clinics, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. Volumes I to IV, Thirty-Fourth Series, 1924. 8vo. Cloth. Price $4.00 per volume. J. B. Lippincott Company, Philadelphia and London, 1924.

The list of contributors to this series of International Clinics contains so many distinguished names that it would not be possible, in this limited space, to enumerate them. This clinical quarterly has the prestige of many years of splendid service to the profession. Volume I is divided into the following principal parts: Clinical Lectures; Symposium on the New-Born; Diagnosis and Treatment; Rectal Diseases; Industrial Medicine; Mutter Lecture of the College of Physicians of Philadelphia; Progress of Medicine for 1923. Volume II: Symposium on Physiotherapy; Diagnosis and Treatment; Neurology; Paediatrics; Surgery; Pathology; Industrial Medicine. Volume III: Public Health and Hygiene; Diagnosis and Treatment; Medicine; Paediatrics; Surgery. Volume IV: Diagnosis and Treatment of Certain Disease Entities; Diagnosis and Treatment; Medicine; Paediatrics; Surgery, and Industrial Medicine. The busy practitioner can obtain from these volumes, in convenient form, much of the best work of leaders in medical thought and endeavor, both in America and abroad.

Texas State Journal of Medicine

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH OF TEXAS

The Program for the Austin Session is printed in full in this number of the JOURNAL. The usual pamphlet reprints will be made, of course, for the use of those who attend the Annual Session, but the full program is always given in the April number of the JOURNAL, both as a matter of news and as information. We trust that our readers will at least give the program the once over. Perhaps in this manner a wavering decision will fall to the affirmative side. President Dr. Bledsoe is very anxious for a full attendance at this session, as all of those in authority are, in order that the important questions pending may be settled, and settled right.

Perhaps we may briefly comment on the program. The registration office will be on the mezzanine floor of the Driskill Hotel, in connection with the commercial exhibits, as usual. The information bureau will be similarly located. The roomy, stately Driskill is admirably fitted to this purpose. The scientific sections will hold their meetings in the Driskill Hotel, the Stephen F. Austin Hotel and the Odd Fellows Hall, each within a block of the other. The opening session will be held in the Senate Chamber of the State Capitol, and the other general meetings will be held in the Roof Garden of the Stephen F. Austin Hotel. The House of Delegates will hold its meetings at the Elks Club, a very short distance from the other meeting places. The memorial exercises will be held in the magnificent First Baptist Church, just across from the Governor's Mansion.

There will be at least one General Meeting each day, and it is proper for any member to bring up for discussion in any of these meetings, any subject of widespread and immediate importance. While the House of Delegates is the legislative body of the Association, in many respects it must act in obedience to the mandates of the general body, as expressed in its general meetings. Rarely is it the case that any business is transacted in the general meetings, for which reason there is always a program of interest otherwise. These meetings last year will be favorably recalled in this respect. It will be remembered that in addition to the splendid scientific program of one of them, a matter of widespread importance was taken up and decided, namely, the need for better care and treatment of our unfortunate insane, which movement, by the way, in conjunction with a movement started elsewhere, came to a highly gratifying conclusion. It is to be hoped that the general meetings will be largely attended. One of them will be exceedingly interesting, that on the second day of the session. At this time a carefully arranged symposium, or group of papers, on the subject of cancer, will be presented. This occasion should be of interest not only to the profession but to the public as well.

As heretofore, the pulpits of the city of Austin will be filled by speakers of note both in and out of the medical profession, who are competent to deal with public health problems.

The memorial exercises have been arranged with great care, and it is anticipated that the occasion will be one of inspiration to all who attend.

The programs for the scientific sections have evidently been well worked up. We do not recall a program where the titles of papers would indicate greater interest. It is believed that limiting the number of papers, as practiced for the first time last year, has worked to the advantage of all concerned, and the papers have been again limited this year. At best, the program is likely to be crowded if the greatest amount of good is accomplished in the least amount of time.

Section officers promise to put their programs through according to schedule, in the which they will greatly please their respective audiences if they succeed.

The following distinguished guests are on the scientific program: Dr. Charles C. Browning, Los Angeles, Cal.; Drs. Oscar Dowling, State Health Officer of Louisiana, and Lucien LeDoux of New Orleans; Mr. Leslie C. Frank, Sanitary Engineer, U. S. P. H. S., Montgomery, Ala.; Mr. J. E. Le Prince, Senior Sanitary Engineer, U. S. P. H. S., and Drs. Willis C. Campbell and E. E. Francis of Memphis, Tenn.; Mr. J. N. Redfern, manager relief, medical, employment and pension department, C., B. & Q. railroad, Chicago, Ill.; Drs. Russel D. Carmen and Louis A. Buie, Rochester, Minn.; Dr. W. C. Finnoff, Denver, Colo.; Messrs. Homer N. Calver, secretary American Public Health Association, and Arthur Strawson, National Tuberculosis Association, New York City; Mrs. Elizabeth Vaughan, assistant director, nursing service, southwestern division, American Red Cross, St. Louis; Dr. Kenneth Maxcy, Assistant Surgeon, U. S. P. H. S., Washington, D. C.; Dr. Burton A. McGlachlin, director physical education, Port Arthur, and Dr. Henning Kofoid, Berkeley, Cal.

The entertainment features are very attractive. The Arrangement Committee has certainly taken advantage of every moment of time available for this purpose. Of course, the principal part of the entertainment will be for the ladies, but the gentlemen are also expected to participate in some of the delightful events scheduled.

The Texas Railway Surgical and Hygienical Association, the Texas Radiological Society and the State Pathological Society of Texas, will hold their annual meetings on Monday, May 4. There is also scheduled for that day a conference of health officers of the State, under a call issued by the State Health Officer, Dr. Sappington. These organizations have come to be an important though not official part of the State Medical Association, and their meetings on the day preceding the convening of our own annual session, in effect extend our session one day. Probably one-third of our registration takes place on that day. Instead of detracting from the interest of our members in our own session, these meetings seem to have increased interest. It was felt that the result would be to the contrary. We are presenting the programs of these organizations with our own. The Public Health Conference will consist of a round-table discussion of public health problems.

The local committee on hotels assure us that those who attend the annual session will be well cared for. Doubtless rooms at the leading hotels will be scarce by the time we all reach Austin, but we are assured that there are ample first-class rooms to be had, close in, and quite convenient, and the restaurant facilities of Austin are ample.

The usual railroad rates have been granted, on the certificate plan, as heretofore. County society secretaries have been furnished with certificates signed by the State Secretary, for the use of their members who must buy tickets. These certificates, when presented to a ticket agent anywhere in the State, will authorize the holder to purchase for his own use and that of any members of his family, such tickets as he may need, at the rate of one and one-half fare for the round trip. Only one certificate is necessary, and there is no other way under the shining sun whereby the reduced rate may be obtained. It will do no good to pay full fare and take receipt or secure the usual certificate from the selling agent, in the expectation that return fare may be had at one-half fare, as is sometimes done. Ours is a different system altogether, and should be understood and followed. It will be well to ask county society secretaries for certificates sufficiently well in advance that an additional supply may be ordered from the State Secretary if needed. The State Secretary will be pleased to send a cer-

tificate to any member who has paid this year's dues, upon his direct request. The selling dates this year will be May 2 to 5, both dates inclusive. The M., K. & T. has been selected by the Transportation Committee as the official route to the Annual Session, where that road is available. It is understood that the Katy will extend the courtesy of passes to physicians entitled to them, provided application is made through regular channels.

An illustrated writeup of Austin appears in the Miscellaneous Section of this number of the JOURNAL, to which we respectfully refer our readers. Whatever of interest may be found in Austin, the climate and the friendly medical profession would make the trip worth while.

All aboard for the Capitol City.

Pay Dues Before It Is Too Late.—On April 1 there were exactly 1,767 members of the State Medical Association of Texas, speaking strictly. There is no such thing as a delinquent member; membership ceased to exist January 1 for all who had not paid dues by that time. As a matter of practical fact, however, only those are dropped from the rolls, and thereby denominated as non-members, who are not recorded on the annual report of their respective county society secretaries. We would be in a bad fix this year were we to apply the rule strictly, but because of the uncertainty and the confusion of the situation, President Dr. Bledsoe has urged and those responsible for the management of the affairs of the Association have agreed, that the time for the filing of annual reports shall be extended to the limit. In other words, all reports will be dated as received April 1, unless some one pulls the law on us, and the bars will not be put up until the State Secretary finds it necessary to file his annual report with the printer, at which time there must be a show down. We are sure no one will object to this effort to care for a situation which is unprecedented.

The State Secretary has carefully studied the figures of last year, and is confident that the total loss in membership will finally prove to be much smaller than was expected. At the time mentioned above, several of the larger societies, which will undoubtedly report a nearly 100 per cent membership, had not made any report at all, which alone will bring the percentage of loss to a smaller point than had been anticipated by some who have been students of organization matters for many years.

The State Secretary is exceedingly anxious that no doctor visit the Annual Session at Austin in the expectation that he will be allowed to pay dues at the time he registers. This is positively against the law, and the Secretary is powerless to make exceptions; he can receive dues from no one except secretaries of county societies, or some one duly authorized to act in such capacity. Even the councilor does not have the authority to pay dues for any members of any of his county societies, and we recall one time when the President of the State Association had to find his county society secretary and pay his dues before he could register at the Annual Session over which he was due to preside.

There is another exceedingly important matter that should receive consideration at this time. County societies are entitled to representation in the House of Delegates in accordance with the present membership, and not for the membership of last year; also, no county society which has not paid for as many as five members is entitled to any representation at all. Of course, a member whose name has been reported to the State Secretary as having paid for the current year will be allowed to register and will be entitled to all of the prerogatives of membership, no matter how many or how few members his county society may have—even though he is himself the only paid up member.

County society secretaries have reported some difficulty in collecting dues, but most of them state that they have had less trouble than they expected. In this connection, the following extracts from a letter of one of the county society secretaries may be of interest, in view of the very pertinent, common sense observations made:

"There are some who are of the opinion that the dues are too high, but it should be remembered that this matter was carefully considered and decided upon in open meeting of the House of Delegates at the last state convention. We elected these delegates and gave them authority to act. It is our duty to back up their judgment and stand by our state officers at this time.

"At the next Annual Session we can instruct our delegates in regard to this matter and then have them do some educational work among other county delegates and decide the question of dues in a satisfactory manner.

"We cannot in any event afford to be at outs with organized medicine as represented by our national, state and county societies.

"The progress that has been made in the last few years in putting the practice of medicine on a scientific basis, has been so marked, and the attainments in the way of saving and conserving human life have been so great, that every man who has the honor of belonging to this ancient and noble profession may well be proud of it.

"Much of this progress has been due directly or indirectly to organized medicine and its various activities, and to the unselfish men who have devoted their time and money to research work and experimentation.

"It should be considered a privilege to have a part in the progress that is going on in scientific medicine. The least we as individuals can do is to back up our county, state and national organizations, and promptly send in our checks for dues."

A member objected to paying dues, giving four very concise and pointed reasons therefor. This member happened to be one whose good intentions could not be questioned, and he was evidently honest and sincere in his objections. For that reason, an official of the Association, to whom he made the objection, wrote to him somewhat in detail. It may be of interest to quote a part of this letter:

"First, you believe that the raise in dues was arbitrarily 'put over' in the House of Delegates, and that the act does not represent the wishes of a majority of the physicians of Texas. This is in error, as I am sure you will agree with me if you will go back and read the transactions of the House of Delegates at Fort Worth and San Antonio. Indeed, if you would understand the situation, you must study the developments of this problem since 1907, at which time we had our first real fight in the Legislature. It has become increasingly evident that if we are to salvage anything of the present agreeable relationship of a splendid profession to a good people, we must inform the good people of the value of scientific medicine in contradistinction to the pseudo-scientific variety. We have had to do this each year in the Legislature, and have always been successful in securing a majority favorable to our contentions, although we lost to the optometrists. Indeed, this loss was an evidence of the necessity of public education on medical matters. We were frankly told by the Legislature that we must educate the public in addition to the members of the Legislature, and that the legislation in question was demanded by the people and not by the Legislature. When our backs were to the wall, fighting the chiropractors to the last breath, we dashed out and delivered a few speeches here and there over the State, and the results were so magical that it was decided to put on a real campaign in the near future. Our House of Delegates had just authorized us to raise a volunteer fund to put over such a campaign, and we felt safe in making the promise. We had not raised the amount required when the next House of Delegates met, in San Antonio. Time was growing short and we had to do something, and do it now. When we reached San Antonio, even our Council in charge of this matter had not thought of asking for a raise in dues. The discussion was so in favor of something of the sort that the project was put forward, and after a discussion extending over three days, both in and out of the House of Delegates, and a long discussion in the House of Delegates, in executive session, where a man could say what he wanted to without fear of it being put in print, the raise was made, and it was made by a large majority. The amount was decided upon after carefully calculating the money needed to put on a two-years' campaign, for which one year's dues must very largely pay. With the $5.00 for the year 1924, already collected, and the $8,000 already raised, and the $15.00 for 1925, we figured we would have approximately $11.00 per member per year to spend. There was nothing arbitrary about this action. It was done in due order and according to the by-laws of the Association. The contrary cannot be contended.

"Second, you urge that the legislation was rushed through the House of Delegates without giving our delegates an opportunity to ascertain the wishes of their societies. This objection has very largely been answered in the preceding paragraph. I need only to add that if the matter had been submitted to a referendum, the opportunity would have passed before the views of the societies could possibly have been ascertained. You must certainly have no comprehension of the enormity of this task, or you would not think it possible to frame and put into effect this campaign in time to care for the elections, and at the same time hear from county societies. Besides that, the by-laws do not provide for any such procedure. We had to either raise the dues or not raise them; and it will be borne in mind that we could not raise the dues for that year. The increment would not come in until the next year.

"Third, you state that you have no satisfactory advice as to how this money will be spent. You refer elsewhere in your letter to the 'rather inadequate' discussions of this question in the JOURNAL. If you will go back and look over the editorial pages of the JOURNAL, I can assure you that you will find how this money is being, has been and will be expended. Very naturally, we cannot go into minute details in such matters. Nobody would be interested, and besides that, when you are fighting the kind of people we are fighting, you cannot afford to put your cards on the table. It is unfortunate, but a fact, that our organization is hardly along the lines that enable us to keep our members intimately informed on all the activities of the Association. There are two things required to have an organization of this sort: first, there must be money with which to pay for clerical services, visits and the like, and, second, there must be sufficient interest on the part of the membership to read what is published and what is said. There is always a different sentiment following adequate explanations. There are individuals, no doubt, who will not be convinced. I do not speak of these.

"To be exact, $1.00 of our dues still goes to medical defense, $2.00 to the JOURNAL and the balance to the general fund. The Trustees will apportion the money in the general fund to the several funds covering the several activities of the Association, in accordance with budgets furnished by those in charge, and the best judgment of the members of the Board. The Council on Legislation and Public Instruction propose to continue to educate the public, by whatever means it may find convenient, economical and effective, at least until local authorities can successfully prosecute violators of the medical practice act, and until the public will elect representatives and senators to go to Austin who will listen to scientific medicine and not to self-seeking quackery. I believe you can safely depend on those in charge of this movement as to what procedures they will adopt

further, remembering that there will be nothing more done until after the meeting at Austin.

"Fourth, you do not believe that any good will be derived locally from the education of the public. In that you are mistaken. We cannot claim to have been successful in correcting local conditions over the entire State, but we have been successful in certain localities, beyond any doubt, and we will be successful in all of them sooner or later if this work is kept up. It is a cinch that so long as the people believe that the prosecution of the violators of the medical practice act is a matter of contention between schools of medicine, just so long will we not be able to convict, but as soon as the people learn the difference between scientific medicine and quackery, just that soon will they demand conviction and just that soon will they get it. We cannot tell all we know is going to be done in this particular, and I shall have to ask you to depend upon us for that.

"In regard to the numerous members of the Association with whom you have talked who are opposed to the publicity campaign, may I not point out to you that contenders against the established order of things are always more talkative than proponents thereof? I say this with no desire to criticize those who differ with us in this matter, but it is a fact, nevertheless. I do not say that the dues should remain at $15.00, or at any other point, as for that, but I do feel that if those of us who are devoting our lives to this service ask for support, we should have it or be turned out. If we are to make brick, unquestionably we should be furnished with straw. Perhaps brick is not wanted at this time; if so, then the argument falls to the ground without further discussion."

Forecasting the Policies of the Next Administration.—President Dr. Bledsoe has suggested the publication of a letter addressed to him by President-Elect Dr. Rosser, which anticipates somewhat the policies to be advocated by Dr. Rosser for his administration. Dr. Bledsoe, while not desiring to mix administrations, urges that it may be advisable for us to contemplate somewhat in advance the suggestions made by Dr. Rosser, in order that sentiment may be crystallizing:

"Assuming that our policy of having a President-Elect named one year in advance of official responsibilities contemplates that he shall familiarize himself with the activities in hand and also formulate plans for the immediate future, I expect to propose to the House of Delegates three principal procedures when the Association meets in Austin, in May, as follows:

"(1) Self purification on the part of the profession in such particulars, if any, as purification is needed;

"(2) Reclaiming to our membership such as may have lapsed for any surmountable cause, and securing additions to the membership of such eligible practitioners as have not heretofore belonged, and

"(3) Co-operation with the State Board of Medical Examiners in such efforts as may be made to enforce the Medical Practice Act.

"I know that your entire official family is in hearty sympathy with the spirit in which I shall urge these important enterprises, and I feel confident that the House of Delegates will approve some workable program for their successful consummation.

"While of these, enforcement of the medical practice act will be of paramount interest, because of the work already done, each of them are important; and being sure of approval by the House of Delegates, I would in the interval collect such pertinent data as may be had. This would aid in determining the magnitude of the undertakings, save lost motion, and by preserving momentum advance the good work.

"The data especially desired is (1) a list of lapsed members and, so far as possible, the reason assigned for delinquency; (2) the names and addresses of such honorable, intelligent and legally qualifed practitioners of medicine residing in the various counties in this State as have so far failed to identify themselves with their respective county societies, and, insofar as possible, the cause of such failure, and (3) the names and addresses of all alleged violators of the medical practice act, together with the school of medicine to which they claim to belong, or cult or system of practice to which they claim to adhere.

"I hope there is some machinery in your hands by which this information may be accumulated, and I write you at this time to ask your co-operation in this regard. The thought I have is, that through the councilors of the several districts, the president of each county society may be requested to select one or more of his most active members for the service required in each separate county. If there is a better plan, I shall be equally well pleased to see it employed. The campaign to secure the passage of the medical practice act is now history. The increase in dues made possible a campaign of publicity to popularize the principles underlying the law, and that is now history. Enforcement should be the next order of business, and all of us, each member, should be thinking out the best ways whereby this can be done. Unless it is done, much of the previous work in that direction will have been wasted, yes, worse than wasted!

"To carry out this program the Association must continue for at least another year to provide substantial funds; and when carried out our patriotic membership will be glad of all contributions made, whether of time or money, or both time and money. Our own self respect and our duty to the public, demands results."

Reclaiming to our organization those of our members who have allowed their membership to lapse, particularly those who have dropped out because of the recent increase in dues, and claiming to our standards those reputable physicians in our midst who have not heretofore enlisted in our service, are matters of extreme importance, particularly in view of the fight we have recently been making in the interest of scientific medicine and against quackery and medical imposition of every character. We are aware of the antagonisms thus engendered, and there can be no doubt but our antagonists and certain of the politicians, are keenly interested in the support the profession will henceforth give to this campaign. It has been freely charged that the campaign was launched and carried out by only a few of our members, and for their own aggrandizement, and not, as claimed, in the interest of the public health. Defections at this time will be observed by the opposition with great satisfaction. The assumption will be that in this fight our morale is low, and an army, or a people with low morale, will never win.

In the matter of prosecution of violators of the Medical Practice Act, we believe our members will agree heartily that these law-breakers should be punished exactly as other outlaws are punished. Just how far we should go in this matter as an organization is a question to be decided by the proper tribunals in our organization. As it stands now, we are committed to the encouragement of such prosecutions but not to active participation therein. Whether this is enough for us to do remains to be considered. While it is an undoubted fact that ignorant and unlicensed practitioners of medicine are doing great harm and should be vigorously brought under control, the further fact remains that we are not enforcement officers, and may not properly be held to account for this shameful violation of one of our most important laws. Indeed, any activities on our part in this direction very promptly bring forth the charge that we are persecuting and not prosecuting, and for selfish reasons rather than for the protection of the public.

A determined effort was made during the regular session of the last Legislature to compel recognition by law of one of the cults (chiropractic). This effort failed signally, no doubt, very largely due to our recent educational campaign, which would lead to the conclusion that the public has at least been partly aroused, and may be with a little additional effort completely aroused to the importance of controlling the practice of medicine for all. It is believed that enforcement officials are ready and wililng to require at least a respectful consideration of this law by those who at the present time openly flaunt it, and that it will be progressively easier to find unprejudiced courts and juries for the trial of such cases. The trouble seems to be that there is no one to take the lead, unless the medical profession does it, which would seem to bring us to the inevitable conclusion that the medical profession must do its duty.

Therefore, county medical societies should immediately take matters in hand, and be prepared when called upon to respond with the necessary activities. It will not be understood that we are advocating active prosecution by county medical societies of violators of the Medical Practice Act. That is not for us to do, there being other agencies for such work, but it is to advise that as good citizens it is our duty to advocate the enforcement of all beneficial laws, of which the Medical Practice Act is not the least.

It is also to advise that in this regard time is now practically at its tide, and if taken seriously will doubtless lead to success.

Revising the Constitution and By-Laws of any organization is a task. This seems to be particularly true in our own case. For two years a committee, with the same personnel, has been under instructions to prepare a complete revision of the Constitution and By-Laws of the State Medical Association. While it is true that there have been many diverting influences, it is also true that this committee has given close study to the subject. Each member of the committee has been furnished with the constitution and by-laws of practically all of the state medical associations, for purposes of comparison, and each member is conversant with the workings of our present Constitution and By-Laws, and has in mind the discussions pertaining thereto that have from time to time arisen in the House of Delegates. The results of this committee's endeavors will be found in the Miscellaneous Section of this number of the JOURNAL, to which the attention of our members is earnestly directed.

We will not undertake to comment here on the rearrangement and revision of procedures and practices as set out in the proposed new version. Doubtless the committee will prepare such a discussion and include the same in its official report to the House of Delegates. But we will presume to call attention to the fact that no section of a constitution and by-laws should be considered as a distinct and final pronouncement on any subject. It may be true that it is, but chances are that it ties into some other section, and is both supplementary and complementary to more than one section. It likely happens in more than one place that one section so modifies another as to make different meanings in different cases, according to circumstances. It is, therefore, necessary to make a close study of any instrument of this sort before drawing conclusions as to its important provisions.

In the present instance, the first endeavor has been to revise both the Constitution and By-Laws, so as to bring them in closer harmony with the usual rules of order and the usual procedures in such matters. The next effort has been to eliminate useless provisions, simplify involved statements and expand statements that are not clear because of their brevity. The task has been completed by the addition of such provisions as have appealed to the committee as necessary or desirable, in the proper conduct of the affairs of the Association and its subordinate bodies. In this, the committee has taken into consideration the numerous proposals made through the House of Delegates, and has incorporated such of them as the committee believes wise, and has not incorporated those it does not believe would be to the best interests of the

greatest number. The committee has endeavored to keep in mind the basic plans of organized medicine as it exists throughout this country and as represented by the American Medical Association. It is believed that a distinct improvement has been made over the usual laws of state medical associations, but none of the innovations are in any way in contravention of the laws of the national organization. Some of the changes heretofore proposed, if adopted, would seriously disturb the accepted plans and order of things. The committee has also endeavored to provide for the closer coördination of component county societies and district societies, and for a more consistent and effective control. It has endeavored to do this without interfering with the autonomy that rightfully belongs to these organizations. The experience of our Board of Councilors in attempting to settle disputes and difficulties that have arisen in component county societies, is illuminating in this respect. It has been found that a large proportion of these difficulties have arisen through lack of provision for coördination, or because of misunderstandings that have occurred.

It is to be hoped that the Constitution and By-Laws here proposed will be studied in a thoroughly unselfish spirit and that the greatest good for the greatest number, both now and hereafter, shall be the controlling factor in all decisions pertaining thereto.

Volume XX Is Completed with this number of the JOURNAL. As this book takes its place on the shelf beside two decades of ancestors, we realize that it is again time to take stock. Introspection may not be wholesome when too frequently indulged in, but like the much execrated calomel purge, it is doubtless good for the system occasionally. We would fain sigh with Bobby Burns, "Wud tae God the gift tae gie us ——!"

As we have said before, this is *your* journal. The editor cannot put out a scientific journal, or one that is a literary masterpiece, unless the contributors supply that type of material. A medical journal that is the mouthpiece of its state organization cannot, for that matter, aspire to the same plane as those journals which accept nothing for publication but that which is thoroughly scientific. Unless our readers are indulgent enough to take us into their confidence and point out our faults (editorial, of course; we will trust old St. Peter to record the others), we have no mirror from whose depths we can learn the truth, and so improve ourselves. The idea we are trying to convey in this rambling discussion, is that if you do not like the way the JOURNAL is edited, tell us about it. We are always glad to consider any suggestion that will make for a better JOURNAL.

The size of the present volume is very much the same as that of its predecessor, in spite of the fact that the number of papers read before each section of the last Annual Session was very materially reduced. It has long been the policy of this publication to, as far as possible, make each volume self-supporting, and not a drain on the general fund of the Association. We believe this to be a sound business policy. Therefore, if our readers desire a larger JOURNAL, they should give us their coöperation in the matter of securing advertising space from those who would profit therefrom, as well as the JOURNAL. This is an age of intensive advertising, and as General Nathan Forrest is said to have once remarked, "The one what wins the mostest fights, is the one what gits thar fustest with the mostest men." So in the matter of advertising, the house with valuable goods to sell that wins out, is the one *that gits thar fustest with the mostest advertising.*

The reading pages of the present volume divide themselves as follows: Editorials 98, Original Articles 383, Miscellaneous 115, News 12, Society News, 56, Book Notes 22, Deaths 16, Index 14. The pages of the preceding volume divided in the same manner showed: Editorials 114, Original Articles 395, Miscellaneous 113, News 11, Society News 55, Book Notes 14, Deaths 19, Index 14. In Volume XIX, each number of the JOURNAL contained a symposium (as nearly as possible) on some subject or group of related subjects. In the present volume, the endeavor has been to include one subject from each of the principal specialties in medicine. We would like an expression from our readers as to this policy. They doubtless express their opinion to others; they might let us have the benefit of it, too.

The Index with which this volume closes represents a great deal of labor, as well as expense. Properly used, it should be of value to our readers, especially those who keep a complete file of the JOURNAL. In this connection we would urge our readers to have their volumes bound. Those who care to, may exchange their copies for a bound volume, by paying only the actual cost of the binding. Each year we have a number of extra copies bound. Just last week, we sold the last bound copy of Volume XIX, that was available. It might, therefore, be well for those who desire volumes bound for them, to let us know in advance, in order that we may anticipate the number to order. We might state further, for the benefit of those who have not seen our bound copies, that they are uniformly bound in red quarter morocco and gilt, and

really make an attractive addition to any library.

In closing this volume, we desire to express our deep appreciation of the cordial assistance, and kind indulgence of our readers and contributors, to whom the credit is really due for whatever there may be of merit therein.

Contributors to the Scientific Program (including the General Meetings) are urged to supply the Publicity Committee with synopses of their papers. Authors should mail these immediately to Dr. Ralph E. Cloud, Austin, Texas, Chairman of the Publicity Committee. This information is necessary in order to inform that part of the medical profession not in attendance of what is going on at the meeting, as well as to acquaint the general public with the nature of our Annual Sessions. This latter desideratum is of more importance than many of our readers perhaps ascribe to it. Although this editorial in somewhat varied form appears annually, Ye Editor is constrained to conclude that it is very little read, as manuscripts continue to be handed in for publication in the same unprintable form. Medical copy furnishes enough grief, *per se*, for the unfortunate linotyper who has to set it up, without being further complicated by being single-spaced, on flimsy, transparent paper, by machines with type in such neglected condition that "o," "e," and "a"—like the proverbial coons—all look alike, and frequently by being a smudgy, carbon copy instead of the original.

The editor, of course, delights to pick up a manuscript that has been re-edited between the lines and on the margins and even the back of the sheet. Such notations and additions often, like a circle, have neither beginning nor ending. It seems to be a sort of established custom for authors to write their case reports as if they were writing a cablegram in which words were extremely expensive. Such reports may *sound* well when delivered by the author with frequent *asides* and *interpositions*, but they do not *look* well in cold type. Such a small matter as a verb or a subject may be an unimportant part of a sentence, but our literary critics do not, as yet, seem to have arrived at that advanced position. It seems to be customary to ascribe all errors in orthography (as well as grammar) to the long-suffering stenographer, but lest we conclude that the author is incapable of correcting such defects, or even that the errors originated with him, we would politely but firmly suggest that it might be an aid to his reputation, both as an author and as a grammarian, to read his paper over carefully as least once before handing it in for the contemplation of such a scholarly mind as the editor admits that he possesses.

Although we do not expect the prospective author to heed our solicitations, we will, nevertheless, repeat that a manuscript submitted for publication should be typewritten, on one side of standard-sized, white paper (not tissue), double spaced, and an original (not carbon) copy. The pages should be numbered, and pinned together, or attached to each other in such a manner that they may be separated without a chest of tools or recourse to due process of law. A wide margin should be allowed on at least one side of the page. Sentences should not be of interminable length, nor should they be epigrammatic. Scientific terms, as well as ordinary English words, should be correctly spelled—even the editor has to consult the dictionary *occasionally*.

Finally, lest ye forget, each paper read at the Austin Session must be accompanied by a certificate from a county society secretary stating that the paper has been read before the society; and where this was impossible, there should be a certificate from a district society.

NATIONAL ADVERTISERS' ASSOCIATION DENOUNCES QUACK ADVERTISEMENTS.

The executive committee of the Association of National Advertisers, which is composed of representatives of concerns whose combined advertising budgets exceed one hundred and fifty million dollars, has recently adopted resolutions calling upon the members of the association to discourage the advertising of medical preparations offered as preventives of, or cures for, such diseases as tuberculosis and cancer, which are at present regarded by the best minds of the medical profession as incurable so far as treatment with drugs is concerned * * * to spread misinformation on such a vital subject is * * * to commit a social crime.

The committee calls attention to the fact that every advertisement that perpetrates a fraud or causes a sneer from intelligent readers, increases the reputable advertiser's task and his selling cost.

The National Vigilance Committee, which publishes the Truth-In-Advertising Bulletin, in commenting on these resolutions says: "This type of advertising must go. It costs all of us too much—cost in human life, in taxes paid for the support of indigent victims, in direct damage to the business of every enterprise which employs advertising to create markets and sustain good will."

This is distinctly encouraging. The patent medicine manufacturer depends on advertising. If the members of the National Advertisers' Association heed the recommendations of their executive committed a long step will have been taken toward the suppression of this pernicious business.

ORIGINAL ARTICLES

MYSTICISM AND FATALISM IN THE TREATMENT OF HEART DISEASE.*

BY

K. H. BEALL, M. D.,
FORT WORTH, TEXAS.

There are two great evils which have stultified the profession in their dealings with heart conditions—mysticism and fatalism, or pessimism.

It is remarkable that the field of heart disease should be so obscured by this cloud of mysticism; *its* field should be the clearest. Did it ever occur to you that the heart is the only organ in the body whose very physiology can be *seen,* can be *felt,* can be *heard,* can be *measured* in millimeters of mercury, can be *pictured* on a smoked paper and can be *studied electrically?* Since these things are so, why do we not know a great deal about the heart? The real fact is that we *do.* We have more exact knowledge regarding the heart than we have concerning the liver, the spleen, or most any other organ concerning which we talk knowingly, while of the heart, we seem afraid to speak. My advice to any one to whom heart conditions are vague, is to read Mackenzie's little book on "Principles of Diagnosis and Treatment in Heart Disease," and using his own practice as his clinic, acquire a common sense working knowledge of the orderly and disorderly action of this organ. Mackenzie, who is (whatever else one may think of him) the most talked of cardiologist in the world, did all of his work while an humble general practitioner in a small town.

The arhythmias or irregularities of the heart beat offer much confusion. It should be common knowledge, but apparently is not, that irregular beating of a child's heart is practically of no significance and, in fact, usually means a normal heart and is a sign to be welcomed after a fever, for instance, as indicating that the heart has probably escaped injury. This sinus arhythmia of children and young people is extremely common. The heart is usually slower during expiration, and if it is the only sign of heart disease present, is to be absolutely ignored. Children's activities have very often been curtailed after a slight illness because of this normal sinus arhythmia and the parents almost crucified.

Another irregularity, increasingly common from the age of twenty on, is the arhythmia due to extrasystoles. This is the condition which frightened patients so vividly describe as the heart stopping. It really does not stop, but a beat occurring prematurely gives rise to a lengthened rest period, which the patient interprets as a stop. The cause of extrasystoles are numerous. We know that they are sometimes produced by alcohol, tea, coffee and tobacco. Psychic influences seem to be the factor in a large number of cases. This seems certain, that if extrasystoles are the only sign of heart disease, there is no heart disease.

The most important of the irregularities because the most serious—and the only common serious arhythmia—is the so-called auricular fibrillation. This is the *delirium cordis,* the most disorderly action of the heart, familiar to you all in the aged, and in the younger with rheumatic hearts. In this remarkable condition the fibres of the auricles become mutinous, ceasing to beat in unison, each fibre vibrating to its own time; the ventricles respond to a most irregular and varying number of these fibrillary contractions of the auricles leading to an irregularity in force and rhythm, seen in no other condition.

These are the cases *par excellence* for digitalis, which slows the ventricle and prevents its exhaustion, by curbing its efforts to respond to the multiple impulses coming down from the disorganized auricle. It is in connection with fibrillation that a most valuable discovery has recently been made—that twenty or thirty grains of quinine, or better, its isomer, quinidine, can in many cases remarshal the mutinous fibers of the auricle, restoring to the heart its normal rhythm. Wenckebach recommends quinidine for all irregularities of the heart, such as extrasystoles and paroxysmal tachycardia. I have had two cases of the latter in which quinidine seemed to be of the greatest service. This discovery may rival in value Withering's use of digitalis; but is it not a commentary on the blindness of medical practitioners that not until the third century of the extensive use of cinchona was one of its most important therapeutic actions discovered, and, even then, not by one with whom its use was an everyday occurrence, as it has been with you? Surely, right here in San Antonio (perhaps, often), fibrillation has been accidentally relieved, and the malaria under treatment has proved a blessing in disguise to the poor fibrillator. This is probably why quinine has acquired somewhat of a reputation as a heart tonic. The few other arhythmias need only a little study and observation for clarity, and any mysticism toward an irregular pulse is usually entirely unwarranted.

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 30, 1924.

It has long been a wonder to me that any heart could be free of murmurs, and it has in recent years been a delight to me that the significance of murmurs has grown less day by day, until now, if one loses his stethoscope, the patient loses little and may even get saner advice if his heart is not listened to. This, of course, is a slight exaggeration, but the reign of the murmur is over, and at the present time no one is justified in diagnosing an inefficient heart on the presence of a systolic murmur alone. This common sense view was hinted at by Graham Steele many years ago, but it took a World War with the necessity for a cardiac evaluation which was founded on nothing but sense, to establish it. As yet, the heart has not been accused of supplying an internal secretion, and, so far as is known, its only function is to pump blood; hence, if you are unable to elicit evidence, subjective or otherwise, that it is failing in its only requirement, that of pumping blood, you should hesitate to accuse it of insufficiency on murmurs alone, be they soft or blowing, harsh or musical. The heart should be studied to determine its efficiency as a pump, and not as an instrument for making noises of any certain kind.

Lest some one might interpret this as a preachment against the stethoscope rather than against systolic murmurs, I hasten to state that, of course, most valuable information is often elicited by auscultation. Usually very easy of diagnosis without auscultation, aortic insufficiency is occasionally discovered only by the presence of a faint diastolic murmur. When the diastolic pressure is found to be very low, or is difficult to accurately determine, this lesion should always be suspected.

The whole question ever to be kept in mind is the present efficiency of the heart and the prospects for the future. These things depend on the soundness of the heart muscles; if its response to effort as reported by the patient and found in your examination is normal, it is sound, and the patient should be spared the agony of soul, which he suffers on being told that he has a heart murmur. If his heart muscle is not good, then you should exert every possible effort to improve it, and to prevent the patient from unknowingly demanding of his heart more than it can properly do.

Fatalism is the description of the present therapeutic attitude of the medical profession toward heart disease; and this fatalism is a daughter of the mysticism which has so long hindered exact diagnosis and prognosis. Fatalism may be a necessary adjunct to the slothful philosophy of some religionists, but no good physician can be the least bit fatalistic. Fatalism is a cowardly attitude and has no place in therapeutics, and a sufferer from cardiac disease is unfortunate who has for his physician one whose efforts are influenced by mysticism or fatalism. Few, I believe, realize that wonderful therapeutic triumphs occur in the treatment of cardiac disease, but they never occur in the practice of a fatalist.

The first step in the treatment of cardiac disease is to remove, if possible, the cause which may or may not be still operative. There may be several contributory factors, some of which may be removable; some may not be. You should study the patient carefully and every potential factor which might damage a myocardium should be eliminated if possible. Syphilis and other chronic infections should be properly treated; oral sepsis, tonsil infections, appendicitis, cholecystitis and urological infections should be gotten rid of. *Generally speaking, a damaged myocardium can better stand an operation to get rid of an infection than it can stand not to have one.*

Poisons, such as lead, and those poisons which are usually taken when alcohol is drunk—especially in these latter days—should of course be avoided. A psychic study is most important, and a regulation and supervision of all matters of work and sources of worry is essential. The patient must be dieted; he should be given just enough calories to satisfy his hunger—not his appetite—so that the work of his myocardium will not be increased by the ingestion of one ounce more food than is necessary. He should also be dieted to lose all his surplus flesh, and myocardial patients more often than not have surplus flesh. He must eat up this flesh so that his poor myocardium will no longer have to pump blood into perhaps 30 or 40 pounds of surplus fat, every time it fills its own coronary arteries.

The medical profession has not yet grasped an evident truth fraught with the greatest therapeutic potentialities, that lessened weight is lessened metabolism, and lessened work for every organ in the body. In many cases the work to be done by the heart can be lessened by a percentage greater than its inefficiency, but this is carried out too rarely. The patient must go to bed and stay there, perhaps for months. If you recall that when lying down the normal pulse is sixty or seventy, sitting up it is around eighty, and that standing or walking it is around ninety, you can see how simply work for the myocardium can be saved by staying in bed—probably about 10,000 heart beats a day saved by the rest in the bed. During the extra rest to the heart by saving of these

10,000 heart beats, its own *vis medicatrix naturae* will certainly be much increased. Does it occur to you that saving 10,000 heart beats a day affords about the same amount of rest as permitting the heart to stop beating for one whole hour? Can you think of anything better for a crippled heart than to be able to stop and rest for one whole hour? Exactly that effect it at your command. During your patient's rest, physical and mental, he is going to have another's myocardium exercise his muscles; he is going to have massage and get all the benefit of exercise without paying for it in a damaged myocardium. He is going to stay in bed until in the judgment of his physician his myocardium has so far recovered and he has so lowered his metabolism, that his life may be one of pleasure and usefulness.

If these things have not happened, why get up? Why get up to die? Most any man would rather stay in bed and live than get up and die, and if you can promise a reward for a long stay in bed, then he does it cheerfully. I have never had the slightest difficulty in keeping a patient in bed. When the physician has had the pleasure of seeing men well and active ten years after cardiac decompensation, angina pectoris, and other serious cardiovascular catastrophes, he has enthusiasm and optimism to give his patient.

The treatment of cardiac disease reminds me of orthopedics; it is slow and tedious, and perhaps when you finish, although better, your patient is still crippled, but often your results are most gratifying. There are no caesarean sections—unless it be the use of quinidine—in treating crippled hearts. But if the results *are* slow and the work *is* tedious, it's your work, and you mustn't say, "There's not much to do for a fellow with a heart like that." *There's always much that you can do.*

ABSTRACT OF DISCUSSION.

Dr. N. D. Buie, Marlin: Dr. Beall's paper is remarkable for its completeness and for its practical application to the everyday needs of the busy physician. However, I must disagree with him when he says that the heart is well studied and that physicians in general have a very complete knowledge of the heart. I think he should modify this statement by saying that physicians should have a complete knowledge of the heart, and that this knowledge is at the disposal of every earnest practitioner who has a desire to learn.

Sir James McKenzie is a brilliant example of what any doctor can do by using his brains and very little other equipment. McKenzie studies his cases as we should ours. I agree with Dr. Beall in regard to the youthful irregularities of the heart, which are quite common, and they are also common with neurotic, worried and overworked adults. I would say in regard to extrasystoles that my observation has been that premature contractions of the heart, which come during rest and are overcome by exercise, are of no significance, while those coming on during exercise, or which are aggravated by it, are of more grave importance. Digitalis has been so completely satisfactory in my hands in the treatment of fibrillation that I have no desire to try other drugs. Brilliant results have been reported from quinidine, but the drug is not without some danger, and serious results have been reported from its use.

Dr. Beall is quite right in saying that rest is the most efficient of all remedies for a failing heart. Rest, proper diet and a few drugs will do wonders in all hands, in patients presenting any of the cardinal symptoms of failure, notably dyspnea, pain, and dropsy. There is a wonderful trend to Dr. Beall's paper in that it points to the one important thing in the treatment of heart disease, and that is function. Can the heart do its work without embarrassment; and if not, are you able to recognize the difficulty and correct same by sensible therapeutic measures, which should be known to everybody? I am glad he lessens the importance of murmurs. The heart and kidneys are two organs absolutely essential to life, whose functions can be studied and accurately estimated.

I don't like the title of Dr. Beall's paper. It's so good, so true, and so full of meaning, that I would rather call it, "A Practical Treatise on Heart Disease."

Dr. M. L. Graves, Galveston: Dr. Beall in a clear and comprehensive manner has directed our attention to the important subject of heart disease. Last night, while attending the memorial exercises, it occurred to me that three of our number known to me have died from cardio-vascular disease during the past year. Is it not high time, then, that we inaugurate a treatment of these diseases of the heart that will be efficient and give the patient hope? Heart disease is the result usually of a toxemia or an infection. It is my conception that disease of the heart may be recognized by three things: (1) the size of the heart; (2) the sounds of the heart, and (3) its strength or force. All of these studied together may enable you to arrive at a diagnosis, give a definite prognosis and institute the proper treatment. The size of the heart should first be determined. I hold the view that a large heart, or even a hypoplastic heart, is pathological. By careful percussion, and particularly with the use of the fluoroscope and *x*-ray, and at the same time considering the height and weight of the individual, you should be able to arrive at a fairly accurate conclusion.

Now as to the sounds of the heart, reference has been made to McKenzie's statement regarding the use of the stethoscope and that the knowledge of a heart murmur is bad for the physician. I do not so regard this fact. The location of murmurs, their character, intensity and variations after effort, should not be disregarded. Attention should be paid to the sound of the valve and the muscle, and not entirely to stenosis or insufficiency. The force of the heart beat is of enormous importance. The blood-pressure helps to determine this. Rapidity of the heart, as in hyperthyroidism, should be considered important. A heart of this type may go on to dilatation and ultimate auricular fibrillation, which is evidence of a marked structural change in the myocardium. We should therefore make this diagnosis early.

Dr. Beall (closing): One thing that might be mentioned, in closing, is the use of quinidine as a prophylactic. In a case that is a potential fibrillator, I see no reason why quinidine should not be used. It is not necessary that it be taken often or in large doses. I now have two patients with mitral stenosis, who take quinidine every Saturday night.

A REVIEW OF A GROUP OF SURGICAL GOITERS.*

BY

G. D. MAHON, M. D.,

DALLAS, TEXAS.

Before reviewing the small group of surgical thyroids reported in this paper, it would seem best to go briefly into the classification of the types of goiter. Goiter may be divided into (1) colloid goiter; (2) adenoma, (a) toxic, (b) nontoxic; (3) exophthalmic goiter or Grave's disease, and (4) malignancy of the thyroid.

1. Colloid goiters are found in that group of people around adolescence, with enlarged thyroids. The enlargement is usually variable in size, but is always symmetrical, disappearing in most cases when puberty is established. When it does not disappear, the enlargement is usually (though not necessarily) due to fetal rests of adenomatous tissue that persist. This class of goiters interests the surgeon, because he must differentiate them from the exophthalmic group, and must consider them surgical if their size is disagreeable to the patient or is interfering with speech, etc.

It is not always easy to establish a differential diagnosis between a colloid goiter seen in a nervous adolescent girl from an early case of exophthalmic goiter. They are both nervous, both may have tachycardia, both may have a palpable symmetrical thyroid, both may have suffered a weight loss, tremor may be present in both, as well as a loss of strength. Upon what, then, is the diagnosis made?

The patient with exophthalmic goiter always has a warm, moist skin and is susceptible to heat; the nervous, exhaustive type of individual with a colloid goiter, nearly always has dry, cold extremities, and complains of being easily chilled. The former always has a good, if not excessive appetite, except when approaching or actually in a crisis, while the latter usually has a "finicky" appetite. The muscular weakness in the exophthalmic goiter patient is quite apparent, but is only subjective in the latter case. Exophthalmos may or may not be present in the true exophthalmic case, so it is of no real diagnostic value—unless present. There is a bruit heard and a thrill felt in the exophthalmic goiter patient, which are, of course, absent in the other type. These may be lacking, however, if the exophthalmic goiter patient has been given iodine. Metabolic studies may be helpful, if not entirely indispensable, in arriving at the correct diagnosis in some of the more difficult cases.

I have dwelt at length on the differential diagnosis, because we certainly do not wish to remove colloid goiters unless the indication therefor is great, due to the causes already enumerated. Nor do we wish to let the early exophthalmic goiter case go unrecognized through a period when the cure can be more nearly perfect, due to little change having taken place in the vital organs.

2. Adenomatous enlargement of the thyroid is probably the most frequent enlargement seen, and also usually begins about puberty or later. The adenomas may be single or multiple and the growth produces an asymmetrical enlargement of the neck. They may be small and unnoticed, or may attain enormous proportions. This group becomes surgical when (1) they become toxic, that is when patients exhibit the same chain of symptoms as produced by the exophthalmic goiter with the exception of exophthalmos. (This toxicity, however, is usually more insidious in its onset than is generally seen in the true exophthalmic goiter); (2) they are large enough, or so arranged in the throat, as to produce pressure, and (3) when necessary as a prophylaxis against their becoming toxic, since it has been fairly shown by Plummer that 25 per cent of goiters of this type, as seen by him, were toxic, but rarely if ever before 35 years of age, and on the average, the patient had noted its presence for upward of 15 years.

3. Exophthalmic goiter presents a chain of symptoms, the most important of which are briefly enumerated as follows: Nervousness, tachycardia, enlargement of thyroid, tremor, exophthalmos, susceptibility to heat, warm moist skin, increased appetite, loss of weight, loss of strength, nausea and vomiting, diarrhea, prostration and death.

This group of patients are believed by many to be surgical always. Of course, many are too sick when first seen to be treated surgically, but most of them are capable of being built up to the point that a thyroidectomy can be finally done. I believe, however, that there is an occasional case where medical treatment and *x*-ray may be safely tried, though I should be loathe to subject them to this treatment indefinitely, unless a marked benefit is seen, because much valuable time may be lost in temporizing, and because surgery offers very good results, with a mortality in keeping with the judgment exercised in selecting the operation for the patient in hand.

4. Malignancy of the thyroid occurs in the form of both carcinoma and sarcoma.

*Read before the Section on Surgery, State Medical Association of Texas, San Antonio, April 30, 1924.

the latter very rarely. In a frank carcinoma of a diffuse nature occurring in an ordinarily healthy gland, the prognosis is very unfavorable, though some of these patients when treated with radium and *x*-ray, live several years. A circumscribed, early malignancy found in an adenomatous gland, gives a more optimistic outlook.

In the group of patients enumerated in this report, there were 21 surgical goiter cases, seen from January, 1922, to September, 1923. Nearly six months has elapsed since the latter date, giving some time during which results could be studied. There were no colloid goiters seen, in which an operation seemed admissible. Of the adenomas, six were non-toxic and one was toxic. The six non-toxic cases, which were present in people from 21 to 62 years of age, were all operated. Two of these goiters were producing pressure and one, a huskiness of the voice, due to pressure on the recurrent laryngeal nerve. The remaining four cases were operated because of the unsightly growth, and as an assurance against their becoming toxic.

CASE REPORT.

Case No. 1.—A toxic adenoma was seen in a man of 60 years of age. He had noticed his goiter about the age of 18, but had always been well and strong up to two years before he presented himself for examination. During the two years, he had noted a gradual loss in weight and strength in spite of a good appetite. He also noticed that he was becoming nervous, which was unusual for him. At the time we saw him, he was a skeleton of a man, having lost 60 pounds in weight. He had a pulse rate of 110 to 130, and a basic metabolism of +40. He was put at rest for 10 days, thoroughly digitalized and forced feeding was instituted. At the end of this time his thyroid was removed under local anesthesia. He gained all his weight back and returned to work at the end of two and one-half months. It is a year now and he seems quite well.

Our group of exophthalmic goiter cases was much the more interesting, since we were dealing, for the most part, with acutely sick people. There were 14 cases in this group, 10 females and 4 males. The youngest patient was 18, and the oldest 50 years of age, the average age being 33+. The longest period of time the disease had been present was 8 years, and the shortest, 6 months.

CLASSIFICATION AS TO SYMPTOMS.

1. Nervousness, present in all cases.
2. Tachycardia, present in all cases.
3. Enlargement of the thyroid, present in 13 cases.
4. Tremor, present in all cases, much more marked in some.
5. Exophthalmos, present in 12 cases.
6. Susceptibility to heat, present in all cases.
7. Warm, moist skin, present in all cases.
8. Increased appetite, present in all except one case, and this case was entering a crisis.
9. Loss of weight and strength, universally present.
10. Nausea, vomiting, diarrhea, prostration and death, one case.

TREATMENT.

Nine cases in this group were operated. In all of them the condition was so far advanced that either one or two ligations were done preliminary to the operation of thyroidectomy. In two cases, only single ligation seemed advisable, since the reaction from same was so slight that it seemed safe to remove the thyroid. In the remaining seven cases, a double ligation was done, and an interval of from two to three months was allowed each patient. In each case, there was a substantial gain in weight, and in every way the patient was better for a more severe surgical procedure. There was one particularly severe case, however, in which the symptoms returned after a double ligation, so that we did not feel justified in doing a complete operation. In this case, the right lobe was removed, and another two months allowed to elapse before completing the operation, during which time the patient gained 30 pounds. Of the five remaining cases, one died of a complication of diabetes with her hyperthyroidism; one died in a typical crisis before any operative interference was advisable; a third case was of mild degree, and wished to temporize for a time, which we permitted. She has received several *x*-ray treatments, and while her symptoms have not disappeared, and her basal metabolism ranges from +20 to +30, she has unquestionably made some improvement and does not wish to be operated; and the two other cases that are still under observation are not improving, but are putting off having an operation. There have been no deaths following operation in this small series.

SURGICAL RESULTS.

In the adenomatous group, the results have been as should be expected—good. In none of the cases has there been a return of the trouble.

In the exophthalmic goiter cases there has been a marked improvement in every patient. There are several of the early cases that are all but restored to normal. In the cases in which the disease has been present a long time, there have remained and will remain evidences of the ravages of the disease, although they have been restored to a condition where they can go about their daily

routine and live about normal existences. There is one case in the group that I am sure will need to have more gland removed, at some future time, since she has not "cooled off" as she should, and there appears to be a little enlargement of the tissues of the left lobe.

ABSTRACT OF DISCUSSION.

Dr. H. L. D. Kirkham, Houston: Dr. Mahon has brought out the importance of the classification of goiter cases, and this point cannot be too strongly stressed, as it is of extreme importance in determining the proper procedure in each individual case. In considering cases of adenoma, it is important to bear in mind that they are almost always unilateral and may be non-toxic for a long period of time. In most of these cases, the patient gives a history of having had goiter for twenty or twenty-five years before beginning to show toxic symptoms. In many of these adenomas a thyroidectomy is not necessary, the adenoma being merely shelled out of its capsule. In the exophthalmic cases, there can be no doubt of the efficacy of some system of "slipping up on a patient before the operation." Such a system was first suggested by Crile and has been perfected by Frazier of Philadelphia, where one can see many exophtha'mic cases operated upon, and many of them without any knowledge of the operation on the part of the patient until her arrival home.

In cases showing marked toxic symptoms, it is possible to markedly improve these patients and lower their metabolic rate, making them better operative risks, by the injection of boiling water into the glands.

Dr. R. E. B. Bledsoe, Taylor: I have observed a number of girls whose skins were not moist, and who were not particularly toxic, but who probably were early thyroid cases.

I believe that radium finds its greatest field of usefulness in this class of cases of hyperthyroidism; that is, in the early or pre-toxic type rather than the later or profoundly toxic case characterized by tachycardia, exophthalmos, and involvement of the myocardium.

Two toxic cases that refused operation, were referred to Dr. McGlasson of San Antonio for radium treatment; both perceptibly "cooled off" after each treatment and progressed to apparent recovery; the more toxic one, however, relapsed within several months.

Adhesions following both radium and *x*-ray treatments make subsequent operative procedures much more difficult.

Dr. Mahon (closing): The point brought up by Dr. Kirkham in regard to operating upon these people at a time when they are best fit for operation, and in preparing them for operation by doing ligations previously, is indeed a good one, since the mortality rate in these cases will be directly in proportion to the care and judgment used in selecting the type of operation for the given patient. There is one point that I will mention (although I do it with some reluctance, since I feel much harm can come from its use), and that is that the true exophthalmic goiter case will be markedly improved by the administration of Lugol's solution. It must be understood, however, that it, like the ligations, is palliative in its effects and only serves to get these people ready for the operaton.

REMOVAL OF METALLIC FOREIGN BODIES FROM THE LUNG AND FROM THE ESOPHAGUS; TWO CASE REPORTS.

BY

GEO. S. McREYNOLDS, M. D., F. A. C. S.,
TEMPLE, TEXAS.

The following case reports are presented not with the expectation of bringing out anything new, but to impress upon the profession the seriousness of such cases and the possibility of the removal of foreign bodies in the lung or in the esophagus.

CASE REPORTS.

Case No. 1.—Theresa N., aged 3 years, was admitted September 19, 1924, with following history: On that previous afternoon she was sitting in a chair with an ordinary pin in her mouth, when in some way the chair fell over and the pin disappeared, following which the child had a severe coughing spell. The *x*-ray showed the pin to be in the left bronchus almost crosswise of the lumen of the bronchus (Fig. 1.)

FIG. 1.—Common pin in left lung of three-year-old child. Note the almost transverse position of the pin.

The problem here was to grasp the pin at or near the point, and bring its length in line with the lumen of tube. This was done, a 5 mm. tube being used, and with no anesthetic except morphine.

The little patient had some reaction in the lung at the point from which the pin was removed and also had some laryngeal reaction, but both cleared up in a few days.

Case No. 2.—Mrs. J. D., aged 25 years, gave the following history: On the morning of March 2, 1925, at 4 a. m., she had a safety

pin in her mouth, which got away from her and went down the throat, following which she was unable to swallow anything, not even water, without great pain.

I saw this patient at 1 p. m. that same day, when the *x*-ray showed an open safety pin lodged point up in the esophagus at the sternal notch. (See Fig. 2. You will note that the pin is open and crosswise of body showing it to be in esophagus.)

The problem here was either to grasp the pin and carry it into the stomach where it could be turned and brought out point down; to close the pin with the safety-pin closer when it becomes harmless and can be brought out; or to bring the point of pin into the esophagoscope, leaving the keeper end to take

FIG. 2.—Open safety-pin, point up and to the left. The pin is lying in the transverse position, median line, showing that it is in the esophagus. The patient was a woman 25 years old.

care of itself, which it will do, and bring out tube and pin together, the point of pin remaining within the tube.

The patient was given ¼ gr. of morphine one hour before the operation and the pharynx cocainized. The pin was removed, using a 7 mm. esophagoscope and side-grasping forceps. There was no trauma and no reaction following removal of the safety pin, the patient being able to eat and drink as though nothing had ever happened.

In this first case, had the pin not been removed, the child would certainly have developed lung abscess, with shattered health and possibly death ensuing. In the second case, a ruptured esophagus and death would have resulted if the pin had not been extraced. In neither case would the patient ever have been able to expel the foreign body, unaided.

Both cases were seen reasonably early after the foreign body had been introduced, and before any local reaction had taken place, thus contributing no little to the happy end results. The same comment will apply to non-opaque bodies as well, and it is nothing more than fair to the endoscopist that these cases be presented promptly.

ALTERNATING SQUINT.*

BY

EVERETT L. GOAR, M. D.,

and

WALLACE RALSTON, M. D.,

HOUSTON, TEXAS.

As one reviews the literature on strabismus, he is struck by the few references to alternating squint, and by the lack of definite information concerning its management. The text-books give practically no advice concerning treatment, the authors contenting themselves with the remark that these cases are less favorable for operation than monocular squint, or that permanent diplopia may follow operation. We recall having heard in an eastern clinic of a railroad employee who had been operated upon for alternating squint, with the result that he became confused by the diplopia and was killed by a train. This case was cited to students as a warning against operation in alternating squint.

Worth divides alternating squint into two classes: (a) accidental alternating squint, in which the refractive error is about equal in the two eyes, and which, if untreated, tends to become unilateral, and (b) essential alternating squint, in which there is usually little or no refractive error and the visual acuity in each eye is perfect. These two types comprise about fifteen per cent of the cases of squint. The squint may, of course, be convergent or divergent. Amblyopia exanopsia does not occur in these cases, and that is a strong argument in favor of the theory that this condition is the result of non-functioning of the fovea, rather than that the squint is due to amblyopia of congenital origin.

Worth[1] says, "Essentially, alternating squints are, fortunately, not very common. The treatment consists in optical correction of any ametropia which may be present, followed in the majority of cases by operation. Fusion training is impossible, as there is a total congenital absence of the faculty of acquiring fusion." Bishop Harman[2] says, "In alternating types there is no value from

*Read before the Section on Ophthalmology, Otology, Rhinology and Laryngology, State Medical Association of Texas, San Antonio, April 30, 1924.

1. Worth: Fifth Ed., p. 118.
2. Harman, Bishop: Oph. Year Book, 1916, p. 72.

fusion training and operation may be done early." So, according to these authorities there is no hope of securing binocular single vision in alternating squint, and one might expect at best only a cosmetic result. These statements may be true to a great extent, and undoubtedly are in many cases. That they are not always true, we expect to demonstrate in this paper. We present the following cases that we have studied and followed closely, in the hope that they will bring forth a much needed discussion of these points, many of which we are open to conviction upon.

CASE REPORTS.

Case No. 1.—C. L., aged 10 years, school girl, consulted us on April 17, 1923. The family history was negative. The mother had first noticed that the child's eyes were crossed at about four years of age, and thinks that the left eye turned first. An oculist prescribed glasses for constant use, and the mother thought the squint had been less marked with glasses on. She used first one eye and then the other to fix with, at will. There was no history of double vision. The parents were much concerned about the deformity. Examination revealed a well nourished girl, with alternating convergent squint, measuring 20 perimeter degrees for distance and 30 perimeter degrees for near. Vision in the right eye was 20/20 mostly, and in the left 20/20 mostly, and was the same with correction, which was +3.00 D. S. Homonymous diplopia could readily be elicited with red glass and light. She could not fuse the simplest pictures with the amblyoscope. Cycloplegic refraction showed R.+2.75 D. S.=20/20; +2.75 D. S. L.+0.25 Cyl. ax. 180=20/20.

The parents were advised that it was quite unlikely that fusion power could be developed and that a cosmetic result was the best that could be hoped for. They requested that fusion training be tried, and agreed to coöperate thoroughly. Following semi-weekly sessions with the amblyoscope, the patient fused a few of the simpler pictures by May 1. She was then furnished with a stereoscope arranged with a thirty degree prism base out, before one lens. By May 15, the patient could fuse all the amblyoscope and stereoscope pictures, but could not fuse colored lights. We were astounded at the rapid progress she had made thus far. She was furnished with thirty degree grab front prisms and instructed to attempt bar reading for 20 minutes daily, and on May 22 the patient could fuse red and yellow lights with the aid of prisms, and by June 12 she fused red and blue lights. Various forms of orthoptic exercises were continued until August 14. It was decided that no further progress could be made, and in view of the rapid development of fusion power we hoped that accurate operative correction might result in binocular single vision. On August 14, under general anesthesia, a partial tenotomy of the left rectus internus was done after the method of Todd, combined with a liberal resection of the left externus. Both eyes were kept bandaged for four days after operation. On the fifth day the left eye diverged slightly. On August 25 the final sutures were removed and her eyes appeared parallel by the corneal reflex test. On August 29, with a Maddox rod, there were 5 degrees esophoria and 4 degrees of left hyperphoria at 14 inches. With her correction on, there were 5 degrees of exophoria for distance and 3 degrees of exophoria for near, the hyperphoria being the same as without correction. Two degree prisms were incorporated in each lens (2 D. S.) to correct the hyperphoria. With this correction she had 8 degrees of exophoria for distance and 6 degrees of exophoria for near. A little later the correction was reduced to R.+0.75 D. S.⌒2° B. up, and L.+0.75 D. S.⌒2° B. down, with which she had orthophoria for near and distance.

For several weeks she continued to see small distant objects double, a condition which had developed shortly after operation, but which caused her no annoyance. She fused lights at a distance, but with a conscious effort. Eight months after the operation, there had been no diplopia for several months. The hyperphoria has disappeared and orthophoria is found for near and distance, with and without glasses. Her fusion power is apparently perfect.

This case probably belongs to the class that Worth calls accidental alternating, in view of the fact that she had a moderate error of refraction and developed very good fusion power. Considering the fact that she had such a marked squint and equal vision in each eye, it seems remarkable, if Worth's dictum is true, that at her age she could develop fusion sense to such an extent. The surgical correction is as accurate as one can hope for. So this is as favorable a case of alternating squint as one could choose to study results. Is such a result accidental, or might we hope for it in a considerable percentage of cases?

The following case is reported through the kindness of the Chairman of this Section, Dr. W. D. Jones of Dallas, who allowed us the privilege of following it up and incorporating it in the paper.

Case No. 2.—J. J., aged 35 years, male, an office worker, consulted us, April 12, 1924, with the history of having been cross-eyed since early childhood. He had never had his eyes tested or worn glasses. He had a convergent alternating squint, and could fix with either eye at will, preferring the right. Diplopia could not be elicited with red glass and prisms and he could not see both amblyoscope pictures at the same time. His vision was R. 20/20—3; L. 20/20—3. Cycloplegic refraction gave the following results: R.+1.50 D. S.=20/20; L.+1.50 D. S.=20/20. Under local anesthesia a liberal resection of the left externus was done, combined with a partial tenotomy of the left internus. He was undercorrected about 18 degrees for near and 12 degrees for distance, as measured with the screen test, and crossed diplopia could be elicited. Six days after the first operation a partial tenotomy of the right internus was done.

On May 2, ten days after the last operation, he saw double while putting down some figures. At this time he had about 7 degrees of right hyperphoria and 14 degrees of esophoria by the parallax test, and a crossed diplopia with the Maddox rod. His diplopia continued for several days. On May 5, he could fuse some of the simpler amblyoscope and stereoscope pictures. He worked at the fusion training faithfully and well. On May 31, he has had no diplopia for several days. The right eye deviates upward 7 degrees behind the screen, but he overcomes it apparently without symptoms. On June 21, he has had occasional vertical diplopia, and now has 2 degrees of right hyperphoria. A 2 degree prism incorporated in his glasses relieved this. With this exception the patient has orthophoria for near and distance. but he has occasional crossed diplopia for distant objects, usually when the eyes have been used for several hours. With the Maddox rod he has a crossed diplopia of 16 prism degrees, and with this prism he can put the streak on either side of

the light at will. He can fuse all the stereoscope and amblyoscope pictures—a few of the latter with difficulty—and has depth perception.

These cases are reported at length, because such reports are difficult to find and we believe they are of real value. The second case is surely one of essential alternating squint, and it does not corroborate the accepted theory that such cases cannot develop fusion power. It is quite probable that many of these cases might obtain stereoscopic vision if given an accurate surgical correction and intensive fusion training. There is certainly an opportunity for careful observation upon this type of squint, and it is with the hope that these case reports will stimulate a liberal discussion that we present the subject.

ABSTRACT OF DISCUSSION.

Dr. John O. McReynolds, Dallas: I wish to congratulate the essayist on his courageous but cautious presentation of one of the most difficult problems in the entire domain of surgery. No other problem involves such a combination of anatomical and physiological factors, not only of the visual apparatus as commonly understood, but also of the brain itself. In fact, the fundamental cause of essential alternating strabismus is a complete or partial congenital defect in the fusion faculty of the brain. And while this is true, much can be done to improve the condition of the patient by attention to the peripheral organs of vision themselves, in conjunction with a judicious development of the fusion sense.

I regret exceedingly that I am unable to bring to this discussion the valuable information which the doctor so modestly requests, because with equal humility I am still asking for more illumination, after more than thirty years of effort in the twilight zone of ophthalmic myology. However, I would emphasize first of all the necessity of making the most complete examination possible before undertaking any measures of relief. But this examination requires much time and great patience and unceasing diligence and care, so it is very necessary to explain in advance of the investigation something of the inherent difficulties of the problem, in order that you may proceed with the necessary deliberation and thoroughness essential to success.

Every possible abnormality in the peripheral visual apparatus should receive appropriate attention and then the systemic condition—especially the central nervous system—should be carefully investigated. The final step should be the operation, if the facts indicate its wisdom.

Dr. F. D. Boyd, Fort Worth: I do not know of anything that has given me more trouble than trying to straighten a crossed eye. I remember seeing advertisements when I was a boy, which read: "Cross-eyes straightened in three minutes, guaranteed." Early in my practice I thought I could straighten a crossed eye right now. The longer I practice the more I doubt just how much I can do along this line with satisfaction to myself as well as to the patient. The sooner the eye can be straightened the better for the patient. It is an inherited condition, and your patient is usually a child about three years old. The mother wants you to straighten the crossed eyes right away. After everything in the way of muscular gymnastics has been done for the child, but without benefit, then operate. It is certainly bad to have to send a squinting child to school; it is up to us to do the very best that we can.

Dr. W. R. Washburn, Cleburne: I had a case of monocular convergent squint which I treated with atropin in the focusing eye, without improvement. I refracted the case and gave correcting glasses, about plus six in each eye. Later, I operated the deviating eye, using the tucking method on the external rectus and a tenotomy on the internal rectus. But the use of the amblyoscope did not result in fusion. Later, this patient graduated from A. & M. College and became a great pistol shot and duck hunter. This seemed to be a case in which fusion was absent, although the eyes appeared perfectly straight, but he read with one eye at a time. If I am correctly informed, the time to develop the fusion faculty is before the age of six. I believe that this should be begun very early in life; and if you can get intelligent coöperation of the parents, much can be done to save loss of vision in every eye that has a tendency to deviate on account of refractive error.

Dr. N. H. Bowman, Waco: I wanted to hear this paper to find out when to operate these cases. A child is about six years old before the fusion center is developed. Any attempt to develop a fusion sense would be justifiable up to the sixth year. I am not attempting to tell you what to do. I hope the doctor when he closes the discussion will tell us the rest of it. The best time to operate these cases is when they are past six years old and when the parents fully appreciate the difficulties we are up against in getting good fusion. I do not think that we make a serious mistake when attempting to correct these cases, but in concomitant squint it is well enough to be cautious. This is the attitude I have assumed toward these cases in early life. I have been very much concerned about cases that have no sense of diplopia. When you can produce diplopia there is possibly an advantage. You have to get a double vision before you can begin to develop a fusion sense. So far as correcting the condition cosmetically is concerned, that is the last thing to be considered. You can pull these eyes around almost anywhere you want them.

Dr. Goar (closing): I appreciate the discussion of the paper, but am greatly disappointed that no one has related his actual experience with this type of case, that is, alternating squint with good and equal vision in each eye. I wanted to know whether any of you have operated upon similar cases, and if so, what your end results have been. I would particularly like to know whether you have had a permanent diplopia following surgical correction in an adult. According to Worth, the fusion sense is fully developed by the end of the sixth year. As Dr. McReynolds has stated, there are various degrees of fusion power. Worth says that there are three degrees of binocular vision: (1) Simultaneous macular perception; (2) fusion with some amplitude, and (3) depth perception.

I have an idea that some of these patients may really obtain binocular single vision, and that the rest of them will soon learn to disregard the second image just as they did before operation. We need the experiences of a large number of ophthalmologists *who will report their end results.*

The Dick Test.—The U. S. Treasury Department has not authorized the interstate sale of any Dick scarlet fever preparation. The Council on Pharmacy and Chemistry does not accept biologic products until they are licensed by the Treasury Department, and therefore has not considered the Dick scarlet fever preparation.—*Jour. A. M. A.*, Feb. 28, 1925.

BRONCHOSCOPY AND ESOPHAGOSCOPY IN RELATION TO GENERAL PRACTICE.*

BY

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HOUSTON, TEXAS.

In reviewing the accomplishments of medicine and surgery during the past few years, one is forced to admit that in the utilization of the means of diagnosis and treatment of disease at our disposal, and in the recognition of abnormal manifestations in the tracheo-bronchial tree and esophagus, there is yet an attitude of apathy in some localities, and oftentimes a tendency to delay or procrastination.

With the valuable addition to our armamentarium of the bronchoscope and esophagoscope, one wonders at the attitude of some practitioners. They will promptly advise cystoscopic examination of the bladder or the introduction of a stomach tube in order to clear up a diagnosis, but in a case of persistent cough, dyspnea, or difficult deglutition, they administer everything from castor oil to tonic pills, and it is almost necessary that the patient swallow or aspirate a foreign body before the necessity for the use of a bronchoscope or esophagoscope is realized.

The idea of the limitations of the usefulness of these instruments is similar to the former view held regarding the *x*-ray, that is, that the *x*-ray was limited solely to broken bones and the location of foreign bodies—and no impression could be more erroneous. It is in instances such as those above recited, that the practitioner's familiarity with the various diagnostic measures available is most essential, in dealing with obscure conditions of the tracheo-bronchial tree and esophagus, and upon his judgment and advice may depend the turning point in the life, or welfare, of the patient. It is the practitioner or internist that usually is the first to be consulted, and the outcome, if there be delay, may be part of his responsibility.

In a given case, with a history of a sudden or persistent cough, dyspnea, or difficulty in swallowing, the responsibility is a large one, and one's familiarity with the diagnostic method to be employed in such instances is paramount. Delay may be disastrous, and especially so if, in the case of foreign bodies, the first aid consists in the finger being used to bring about dislodgment, and in feeding bread or potatoes to the patient. These two factors are mentioned here only to be condemned. As the result of such measures being employed in two cases, the writer has seen what would have been simple, uncomplicated foreign body cases transformed into dangerous dislodgments and impactions. Therefore, the idea as to first aid that has previously existed in dealing with cases of this character, must be abandoned as obsolete, for, with the advances made in this work, our experience has taught us that rest and quiet is the best treatment—and not manipulation —until the endoscopist is reached.

One can, therefore, see the close relationship that should exist between the practitioner or internist and the endoscopist. In many of these cases, when a definite or reliable history cannot be obtained, and positive *x*-ray findings are not present, the physical examination by the medical man is most enlightening, and will often furnish the only clue existing, a real diagnostic triumph. This physical examination is of great importance to the endoscopist, and should be relied upon. Team work in handling these cases is of great importance, the practitioner or internist occupying a prominent place in this team, even though the community in which he is located is remote from the immediate services of an endoscopist.

Contrary to the idea that some of you may still possess, a thorough bronchoscopic or esophageal examination is not an ordeal to be avoided, or a hazardous undertaking that might jeopardize life, whether it be in a child or adult. From the character of the work, the endoscopist necessarily has to possess sufficient skill and experience to recognize and distinguish the abnormal. To be able to carry out a thorough and rapid examination, with a delicacy of technic that will minimize trauma, he should also possess an equipment that is complete and in working order.

Bronchoscopy and esophagoscopy occupy the identical position as other highly specialized branches of medicine, in that some are more temperamentally adapted to this class of work than others, and possess a certain mechanical sense, the development of which is imperative.

At this point the writer cannot refrain from mentioning the importance of avoiding general anesthesia in infants or very young children, for we are convinced that an anesthetic for this type of examination only adds to the discomfort of the patient, and if the endoscopist does not have the proper skill, more trauma is inflicted during the unconsciousness of general anesthesia. It is the writer's experience that general anesthesia is more useful in esophageal examinations in the adult, and one should develop his skill with these principles in mind.

During the past year we have had many interesting and instructive cases from the

*Read before the Twelfth District Medical Society at Marlin, Texas, July 8, 1924.

bronchoscopic and esophagoscopic standpoint, and while it is true that some of our greatest accomplishments are in the removal of foreign bodies—due, no doubt, to the life-saving feature—I feel that if it is possible by reporting several outstanding cases, to call your attention to the valuable means at our disposal in the diagnosis and treatment of other disturbances in the tracheobronchial tree and esophagus, in addition to the removal of foreign bodies, my efforts will not have been in vain.

CASE REPORT.

Case No. 1.—Mrs. M., aged 45 years, was referred to us with a diagnosis of probable cardiospasm. She complained of difficult deglutition for about five years, but had become progressively worse the past two or three months prior to coming under our observation; in fact, upon admission to the hospital she could only get small quantities of fluid down at irregular periods. Loss of weight was evident, and she suffered much discomfort. Upon complete examination by the attending physician, including laboratory findings, nothing of especial import was noted, except that the teeth were in poor condition, with seven or eight of them missing.

Flouroscopic examination after administration of a barium meal showed a slit-like line of barium leakage through the constriction or spasm at the esophageal hiatus with apparently considerable dilatation of the esophagus above. Being well aware of the difficulty met with, at times, in locating these small openings, especially those of long standing, and in the presence of such an apparent type of spasm and with a dilatation of the esophagus above adding to the tediousness of the search, we decided to have the patient swallow a heavy piece of braided silk, studded with small round lead shot at one end, the shot being placed an inch apart. The patient was then taken before the fluoroscopic screen and given the leaded end of the silk to swallow. By this means we could watch its descent into the stomach and determine exactly the location of the opening, due to the presence of the shot attached to the string, and the further fact that the braided silk had been soaked overnight in a heavy argyrol solution in order to render it opaque to the *x*-ray.

The patient was then placed on the table and the esophagoscope introduced with the silk thread inserted through the lumen of the esophagoscope until the site of the spasm was reached. A small dilator was introduced to the constriction, after which the Mosher type of dilatation was employed. Following this instrumentation the patient was completely relieved, but returned in about four weeks, suffering from a recurrence of the spasm. Following another dilatation (this time without the use of the leaded silk thread, due to the fact that the closure was not as severe as the previous one), she has been completely relieved of her difficulty.

Eucain.—Originally, two kinds of "eucain" were on the market, namely, "alpha eucain" and "beta eucain." The use of the first product has been generally abandoned. The second product is official in the U. S. Pharmacopoeia in the form of hydrochlorid (betaeucain hydrochlorid). Betaeucain hydrochlorid is a local anesthetic like cocain, but weaker and devoid of the stimulating properties of the latter. It does not dilate the pupil, nor does it contract the blood vessels as does cocain.—*Jour A. M. A.*, Feb. 28, 1925.

MULTIPLE SEROSITIS—OUTLINING A VALUABLE ANTE-MORTEM DIAGNOSTIC PROCEDURE.*

BY

JOHN R. LEHMANN, A. B., M. D.,
DALLAS, TEXAS.

Multiple serositis is an extremely chronic infection of the serous membranes, characterized pathologically by low grade inflammatory changes in the membranes with the formation of dense adhesions and the production of a thick cartilage-like glaze over the viscera, which simulates confectioners' icing; and clinically by an intermittent course and a slowly fatal outcome.

The etiology is much in dispute; the majority of investigators, however, favor an atypical tuberculosis. Cantu hypothecates as the causative agent a tubercle bacillus akin to the avian organism. In the case reported at length by Kelly in his monumental monograph, rheumatism played an important antecedent role. This is true also of the case reported by Evans. In other instances, malaria, syphilis, typhoid fever, and other infections have been incriminated.

The symptoms depend somewhat upon the order and degree of involvement of the affected membranes, the peritoneum, the pericardium, and the pleurae. The peritoneal type shows recurring ascites as its most striking manifestation. When the pericardium bears the brunt of the blow, there results an adhesive pericarditis. Involvement of the pleurae produces a chronic obliterative pleuritis. The form of the disease most commonly met is the mixed one with one or the other of the symptom complexes outstanding. I shall speak chiefly of the peritoneal type.

The onset of the disease is insidious and the course essentially prolonged. Intercurrent periods of freedom from symptoms occur. There may be a history of previous attacks of acute pericarditis, pleuritis, or perihepatitis. Quite a number of cases present early transient edema of the lower extremities, which usually disappears with the onset of the ascites. There is occasionally a late return of this, and in some instances it persists throughout the whole course of the disease. Early in the disease the liver is enlarged; later it is shrunken, but as a rule smooth. Marked splenic enlargement is absent or late. Both the liver and spleen are encased in a thick pericapsular coat of icing-like hyaline deposits which are smooth and pearly white in color. These, at times, become so hard and thick that when it has

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, April 29, 1924.

been possible to remove the contained organs exact casts of such organs are left. The diaphragm is more or less thickened. Vague chest pains or typical attacks of pleuritic pain occur, especially along and adjacent to the costo-phrenic margins. The examiner may also feel and hear coarse friction rubs, which are sometimes perceptible to the patient, as in the case of G. T. C., reported in this paper. The termination is uniformly fatal unless intercurrent diseases of some sort take the patient off.

The ascites is early, abundant, often recurrent, and in some instances, stationary for long periods. Osler reports a child who was tapped 121 times; Rumpf a case tapped 301 times; and one cited by Mayo had 600 gallons of fluid removed from his abdomen in five years, the patient remaining in fair health until shortly before death. One of my cases, N. M., was tapped at least 50 times with the removal of at least 150 gallons of fluid over a period of about two years and three months. The fluid is, as a rule, an exudate.

Multiple serositis simulates other forms of peritonitis of known etiology, particularly the tubercular form. It may be mistaken for cirrhosis of the liver, primary cardiovascular-renal disease, or neoplasms. Let us study particularly the points of difference between it and tubercular peritonitis, also between it and cirrhosis of the liver.

Tubercular peritonitis usually develops in an individual of the phthisical physique, with a tubercular inheritance or association. It is most common at, or about, the age of puberty. It appears, usually, as a secondary manifestation of primary tuberculosis elsewhere in the body, especially in the lungs, lymph glands, bones, or genitalia. There is the general clinical picture of tubercular infection. There are more likely to be accompanying digestive symptoms and an evening rise of temperature. The peritoneal fluid is not so profuse and repeated tappings are not so common. There is a rapid growth of young tubercles in the peritoneum. Guinea pigs inocculated with the exudate yield a positive result in about 50 per cent of the cases, while inoculations of tissue emulsions are uniformly positive.

Multiple serositis differs from hepatic cirrhosis, in that the latter shows a quite definite etiology. There is early digestive upset and early splenic enlargement in the latter condition. The ascites is late and, according to Hale White, the patient does not usually survive many tappings. This observation is corroborated by Sir Humphrey Rolleston, who says that tapping is seldom required more than twice before death from toxemia closes the scene. Hemorrhage from the gastro-intestinal tract is fairly common, occurring in 26 per cent of the cases. Edema of the feet is usually a late phenomena. Transient jaundice is seen in about one-third of the cases.

I shall not go into detail regarding the diagnosis from other forms of peritonitis, heart and kidney diseases, or intra-abdominal neoplasms, except to say that each has its characteristic symptom complex and lacks the essentials of Pick's disease.

The prognosis is good as to life if the case is seen early. It is bad as to recovery.

The treatment of these cases consists of tapping when necessary, maintaining the general strength by good food and other methods, and by keeping the patient in as hopeful a mood as possible. Antiluetic measures may be given a trial.

CASE REPORTS.

*Case No. 1.**—N. M., 18 years old, single, male, Austrian, laborer, was admitted to St. Francis Hospital Pittsburgh, Pa., February 23, 1911, complaining of enlarged abdomen, general weakness, dyspnoea, and loss of weight. His past history was negative; his family history was negative, except that his father and one uncle had died of tuberculosis. The duration of his trouble had been two years. It began with enlargement of the right scrotal sack when he was on his feet, which would disappear when lying down. Hernia was diagnosed and he was operated for this. On the day following the operation, the abdomen began to enlarge, and some days later, paracentesis resulted in the withdrawal of much fluid. During the following fifteen months or so, he was tapped about once a week. Numerous diagnoses had been made, among which were: congenital lues, hepatic cirrhosis, and tubercular peritonitis. The Wassermann reaction had been repeatedly negative. For months he had been given mixed treatment without results. He had never had any fever so far as he knew. Exploratory laparotomy had not resulted in a diagnosis, but oxygen had been introduced into the peritoneal cavity with the idea that the condition might be tubercular.

Physical examination: His frame was small and the musculature poor. No skin eruption, jaundice, or cyanosis were apparent, but the skin was sallow. The temperature was 98° F., the pulse 60, and respiration 20. Chest expansion was limited and the ribs were flaring. The lungs showed no abnormality, but the heart was pushed up and the abdomen gave the signs of much fluid. The liver extended to one inch below the costal margin and was somewhat nodular. The spleen was not palpable. There was a rather tense right inguino-scrotal swelling. The extremities were thin and flabby with no evidence of edema. The blood-pressure was 105/70. The urine, blood and eye-grounds were negative.

During his first year in St. Francis, he was tapped 23 times and a total of 265,750 cubic centimeters of fluid were removed from the peritoneal cavity—approximately 266 quarts, almost 66½ gallons, or over two barrels, allowing 31 gallons to the barrel. Laboratory examinations of the fluid showed it to be

*Reported through the courtesy of the St. Francis' Hospital staff. Acknowledgment is due sister M. Laurentine for transcribing and extracting the voluminous hospital records in this case.

clear, amber, with an average specific gravity of 1.014, and average albumen content of 7 grams to the liter, a cell count of 36 to the cubic centimeter, the cells being mostly lymphocytes, and free of organisms, microscopically, culturally, and to guinea pig injection. During this period his clinical condition remained about the same from month to month. There was, at times, slight ankle edema when he was up and about the ward, but this would soon disappear when he was put to bed. There was a little less fluid when he was on an exclusive milk diet, in bed and taking regular saline purges.

On January 23, 1912, the abdomen was opened and an attempt made to establish drainage from the peritoneal cavity into the left internal saphenous vein. At this time the whole abdominal cavity was explored. The liver was smaller than normal and hard, and fibrous-looking areas were seen on its surface. Small nodules varying in size from that of a pea to that of the finger tips, could be felt on its surface. It was adherent to the right kidney and the great omentum was adherent to the abdominal wall. Whitish areas resembling scars were found on the intestines, and at one place in the mesentery there was a small nodule which had a white glistening surface.

This patient died some months after he left the hospital, and had been buried quite a while before I learned of his death. An autopsy was therefore not secured.

Case No. 2.—G. T. C., male, aged 49 years, married, an American farmer, was first seen March 7, 1923. The chief complaints were enlarged abdomen, weakness, shortness of breath, and creaking in the lower axillae.

Present History: One day about a year ago, while marking pigs, and a few months later while running to escape an early morning shower, he noticed that he became unusually short of breath. About the middle of August he was compelled to stop work because of weakness. At this time swelling of his ankles first appeared and gradually extended up the limbs for about a month, when he began to notice an uncomfortable fullness in his abdomen after meals. With this, the edema of the limbs disappeared. At the time he consulted me, his abdomen was tight and he could not satisfy his appetite, which was good, nor could he take a full breath because, as he put it, "There isn't room enough." He described a creaking sensation, particularly in the right side adjacent to the costal margins. This was noticed when he breathed, and he thought that two ribs were loose and were grating together. Some pain and tenderness was associated with this feeling. There was no headache, no cough, no precordial distress, no indigestion, and no nocturia. The urine was rather scanty instead of being increased in volume.

Past History: He denied venereal disease and the habitual use of alcohol. He had never consulted a physician until the beginning of the present illness, which was diagnosed as acute nephritis. He had lived in a malarial region all his life and had had, as he says, "a little malaria from time to time," but had treated it himself.

Family History was negative, except that his father died at 55 of "remittent fever," and his wife was weak and run down some years ago, having had a cough. She had undergone three of four miscarriages, which the patient thought were intentional.

Physical Examination: (Negative findings are not reported.) This patient was a thin, anemic, weather-beaten looking country man, of good intelligence. His mouth and teeth were in very bad condition; heart and lungs negative. There was a creaking as of two pieces of very rough leather being scraped together, which was felt and heard most easily over the dome of the liver and in the lower left axilla. The abdominal cavity was quite full of fluid—so full that no idea could be gotten of its contents. There was nowhere any edema of the subcutaneous tissues. The temperature was 99.2° F., the pulse 80, the respiration 24, the blood-pressure 114/80, weight 126, and height 67½ inches.

Laboratory Findings: Urine: Sp. gr. 1.028, reaction acid, no albumen, and no sugar. Microscopic examination negative. Blood: Hemoglobin, 95 per cent; red cells, 4,740,000; white blood cells, 5,600, with a differential count of 67 per cent polynuclears and 33 per cent lymphocytes. Examination for malarial plasmodia showed none. The blood Wassermann was negative and there were 9 milligrams of blood urea per 100 c.c.

On March 10, 4½ liters of clear yellow fluid were removed from the peritoneal cavity of this patient. About two liters of carbon dioxide gas were immediately injected and *x*-ray films made in various positions. The röentgenological report was as follows: "Following the removal of 4½ quarts of a clear yellow fluid from the peritoneal cavity about 2 liters of carbon dioxide gas were injected. Films made of the abdomen in various positions, soon afterward, show a moderate degree of enlargement of the liver and practically no enlargement of the spleen. The right kidney was visualized and appeared to be normal in position and size. The left kidney was rather low. The spleen appeared to be caught up against the left diaphragm by a dense mass of adhesions. The intestinal coils lying below the spleen appeared to be adherent to it. The right diaphragm was partially visualized and appeared to be markedly thickened. The right costophrenic angle was obliterated by a mass of adhesions. The upper border of the liver was firmly adherent to the diaphragm, but the right border of the liver was smooth in outline and separated freely from the abdominal wall. The heart appeared small but normal in shape. There was no evidence of fluid in either pleural cavity.

Opinion: Moderate enlargement of liver; extensive formation of adhesions in upper abdomen and lower chest on both sides, of the type seen in Pick's disease."

Laboratory report of the fluid removed was as follows: Albumen, 40 grams to the 1,000 c.c.; red blood cells, 17 to the c.c.; white blood cells, 137 to the c.c., of which 6 per cent were polynuclears and 94 per cent lymphocytes; no bacteria were found.

A letter from this patient, under date of December 11, 1923, stated in substance that his condition had not materially changed, that he had not had to be tapped again, and that he was able to go about his farm on horseback and to do light work only, on account of shortness of breath. He stated further that he could feel his liver rock in his side just below his ribs, and that this sensation ran around to the left, "and nothing I take don't seem to reduce it any."

ABSTRACT OF DISCUSSION.

Dr. Chas. L. Martin, Dallas: I had the pleasure of presenting a paper before this section on pneumoperitoneum as a diagnostic procedure a few years ago, but at that time it aroused little interest. We are still using this method of diagnosis at Baylor Hospital and have been able to save the patient a laparotomy in many instances. It is particularly valuable in cases of ascites, because the gas injected causes no discomfort and the cause of the condition is often revealed. As you know, a radiograph of the abdomen does not reveal the complete outlines of the

viscera, but it is possible to demonstrate most of the solid organs if two or three liters of gas are injected into the peritoneal cavity and the patient examined in the proper positions. After the ascitic fluid has been removed, the patient is brought to the *x*-ray laboratory where the trochar is connected to a tank of carbon dioxide gas equipped with a pressure reducing gauge and suitable measuring apparatus. Enough gas is allowed to flow into the abdomen to cause moderate distention, after which the needle is removed and a series of radiograms is made. The gas is all gone in from thirty to forty minutes. Oxygen or air remain in the abdomen for a number of days, and for this reason we prefer the rapidly absorbed carbon dioxide gas. We have carried out this procedure in approximately fifty cases and have never had a mishap, although a few ill effects have been reported in the literature. We use it only in chronic cases and avoid those showing any cardiovascular disability. It has been of great value in diagnosing cirrhosis of the liver with splenomegaly, Banti's disease, abdominal malignancy, kidney tumors, postoperative adhesions, particularly following cholecystectomy, liver tumors, subdiaphragmatic pathology and tuberculous peritonitis.

CESAREAN SECTION, ITS INDICATIONS.*

BY

M. L. WILBANKS, M. D.,
GREENVILLE, TEXAS.

Cesarean section is the removal of the child from the uterus through an abdominal incision; the term should not be applied to the removal of the child from the belly after rupture of the uterus, or to operations for ectopic pregnancy.

There is hardly an obstetrical complication that has not been treated by cesarean section. Indeed, many surgeons know of but one way out of a difficult obstetric situation —suprapubic delivery. Older writers, having to do mainly with contracted pelves, divided the indications into absolute and relative.

When the conjugata vera is contracted to less than 5 to 9 c.m., or when there is an immense child, the indications are absolute, but the narrowing of the outlet may be by exostosis, irremovable tumors, stenosis of the cervix or vagina, and neoplasms of the uterus prolapsed before the child. If these conditions are discovered early in pregnancy many of them may be removed before labor, but not immediately before or during labor. Relative indications for cesarean section will exist when the accoucheur believes that the abdominal delivery offers a better chance for both mother and child than a normal delivery.

In a contracted pelvis, excepting, of course, the absolutely contracted, cesarean section is considered only with a view to saving the life of the child, because by means of embryotomy the child can be safely delivered from below. The field claimed for cesarean section where relative indications are present is in a pelvis with a conjugata vera of from 6½ to 9 c.m., depending upon the size of the child.

Another indication for a cesarean is a prolapsed cord, but since the time necessary to do a cesarean would jeopardize the life of the baby, a version should take the place of a delayed section. In this condition a section would be undertaken only in case of a closed and rigid cervix.

Abnormal presentations of the child (breech or face), *per se*, do not offer sufficient justification for a section, unless there are adjuvant factors which make dystocia, that is, aged primiparity, contracted pelves, or rigid soft parts. A mammoth child puts its case in the class of contracted pelves.

I do not agree with Reynolds and Newell of Boston, in their claims that an abdominal delivery is always better than a hard or possibly an instrumental delivery through the natural channels, and yet I believe that there are cases in which such a procedure is quite justifiable. Sometimes even a spontaneous delivery has left changes in the mental aspect of the patient, that might have been avoided by a section, but it is quite apparent that a section might have been more dangerous.

I might enumerate quite a number of indications for a section, some of which are: Eclampsia, placenta previa, abruptio placentae, primiparity in elderly women due to delayed or difficult conception, stenosis of cervix and vagina, congenital or acquired, heart disease, tuberculosis, pulmonary oedema, etc. This list only furnishes the remote indications, and an accoucheur is not justified in doing a section just because such a condition happens to exist.

Should the dictum, "Once a cesarean always a cesarean," hold? Much disagreement on this point exists, and a decision cannot be reached until the frequency with which cesarean uteri rupture during subsequent labors is known. Findly, Spadley, et al., find numerous reports of such fatalities. Holland found the frequency of rupture was 4 per cent, with a maternal mortality of 30 per cent and a fetal mortality of 70 per cent. Without doubt, the uterus is weakened in the scar, and this is especially marked, if the muscle was improperly sewed or if its union was disturbed by infection, but in the majority of cases it stands the strain of subsequent labors well, at least so says De Lee.

When the absolute indications exist, there are no governing conditions—the child must be removed abdominally, whether or not it

*Read before the North Texas District Medical Association at Dallas, Texas, December 10, 1924.

is alive, and regardless of the condition of the patient. If there is an infection, then a complete extirpation of the uterus or an extraperitoneal cesarean should be done.

To sum up the foregoing and refresh your minds upon the more important points that I wish to stress:

1. Maternal indications: Placenta previa, eclampsia, atresia of the vagina, heart lesions, such as decompensation, previous cesarean section, senile uterus, elderly primiparae, and those physically unfit.

2. Fetal indications: Contracted pelves —conjugata vera of 6 to 9 c.m., or less, abnormal presentations—occiput posterior, impacted face, transverse, prolapsed cord, and nonengagement of a floating head—where version or high forceps are the only alternatives.

The complications incident to cesarean section, which must be considered in contrast to those which are avoided by it, are the following:

1. Shock in cesarean section is comparatively less severe than in other operations of equal gravity.

2. Postoperative hemorrhage is occasionally troublesome, particularly when the uterine incision is through the placenta.

3. Infection should not be any more frequent than in other abdominal operations.

4. Acute dilatation of the stomach occurs in about 9 per cent of the cases, which is more frequent than in other laparotomies.

6. Rupture of the uterus in case of repeated section must be kept in mind.

7. Adhesions frequently occur following cesarean section and are in direct relation to the vaginal manipulations previous to the operation.

8. Uterine fistulas and hernias.

In contradistinction to the complications incident to the cesarean operation, the following complications are avoided by its performance: Lacerations of the cervix, perineal and vaginal tears, sacroiliac disturbances, injury to the coccyx, nervous collapse, and infantile mortality and morbidity.

The most difficult thing about a cesarean section is the placing of the indication. While there are many fine points in the operation requiring skill and proper technique, if uniformly good results are to be obtained, still the most important part is to perform it when it is really needed. De Lee feels that too many sections are done in some places and not enough in others. Many cases that ought to be submitted to this operation, are so botched that the consultant is glad enough if he can get the mother through alive by means of craniotomy. Also, many children are delivered stillborn, by means of forceps—brutal forceps operations, in which the mother is torn and battered most shamefully—children that should have been brought to life by a section. On the other hand, incompetents who know nothing of the mechanism of labor or of the powers and possibilities of nature, see in this method the only way to solve a knotty obstetrical problem. Also, some perform it to save their own time and labor. This all means that our doctors do not know enough obstetrics and that our schools do not teach enough obstetrics. The public does not demand a higher quality of obstetrical work because the women do not know the real facts. Whereas in former years we used to plead for a wider application of the indications for cesarean section, if the present furore for the operation continues to grow, it will be necessary to warn against the tendency. It is too bad that the deaths from the operation are not reported; the mortality rate might dampen the ardor of the extremists.

The choice between cesarean section and pubiotomy is easy. The classic operation gives its best results early in labor; late in labor, if the attempt to save the life of the child is to be made, extraperitoneal section may be considered.

TORSION OF THE GREAT OMENTUM, WITH REPORT OF A CASE.

BY

J. W. NIXON, JR., M. D.,
SAN ANTONIO, TEXAS.

A very unusual surgical condition recently came under my observation, which case I believe to be of sufficient interest to warrant reporting at this time.

The patient, a white male, aged 29 years, married, and by occupation a well driller, had had vague pains in the epigastrium for one week during which time he had been doing heavy physical work. Twenty-four hours before admission to the hospital, while lifting a heavy piece of iron pipe, the pain suddenly became worse. This pain was constant, very intense, was aggravated by food and more pronounced in the upper right quadrant of the abdomen, although there was a sense of uneasiness over the entire abdomen. There was much gas on the stomach, but neither nausea nor vomiting and the bowels had moved following a purgative.

The patient was well nourished; his face was flushed, and he was somewhat shocked. The chest was clear. The abdomen was distended, rigid and slightly tender over the entire surface, the maximum tenderness and rigidity being found over the region of the

gall-bladder, which was board-like and exquisite to touch. No masses could be made out; peristalsis was slightly diminished. Rectal examination was negative. The blood pressure was systolic, 120; diastolic, 80; the pulse, 130; the temperature, 101° F., and the respiration was 28. The blood count showed: Red blood cells, 4 million; leucocytes, 9,500; polymorphonuclears, 80 per cent; lymphocytes, 16 per cent; small mononuclears, 2 per cent, and large mononuclears, 2 per cent. The urine examination was negative. A tentative diagnosis of acute cholecystitis was made.

The abdomen was opened through an upper right rectus incision, exposing a dark, raw, gangrenous mass. On delivery this mass proved to be a portion of the great omentum about six inches in length and three and one-half inches wide. At its proximal end it was twisted on itself clockwise by two turns. The involved omentum lay in close apposition to the gall-bladder, and as a result of its proximity the gall-bladder was somewhat inflamed. The diseased portion of the omentum was ligated and removed. An appendectomy was then performed and the wound closed without drainage. The patient has entirely recovered.

Various authorities have confirmed the opinion that the condition is an unusual one. According to Keen, torsion of the great omentum with sufficient constriction to produce gangrene occurs in rare instances, and furthermore, a torsion of the omentum without a coexistent hernia is extremely rare. The condition was first reported, in 1882, by Oberst. Since that time, 57 cases have been added to the literature. Comer and Pinches made a study of 54 cases, which they reviewed at the same time that they reported three of their own.

While torsion of the omentum may occur at any age, no case has been reported in a patient under the age of fifteen years. In marked contrast to gall-bladder disease, 75 per cent of the cases are seen in men. Another peculiarity, as has already been mentioned, is the frequency with which hernia coexists. Including my case, there have been recorded in surgical literature only seven cases of torsion of the omentum of the abdominal type, in which a hernia was not present. These were recorded by Comer and Pinches, Syme, Stewart, Baldwin, Scudder and Noble.

Vignand and Girandeau divide torsion of the omentum into three varieties: Torsion at a single point, at two different points, and complex torsion. The first variety is the most common, and the case under discussion belongs to this variety. The number of turns may vary from one to several.

Several theories have been advanced concerning the etiology of this condition; the one most generally accepted is, that by forced taxis in reducing a hernia, the omentum is thrown into such a position as to bring about the torsion. Another cause frequently given, and the one which I think applies in the present case, is violent physical exercise. The patient, as has been mentioned in the history, had been working at an oil well where he was engaged in lifting heavy pieces of well casings. This would seem to be the only explanation of the phenomenon.

The diagnosis seems to be of little importance. Not one of the cases has been diagnosed prior to operation. Appendicitis is naturally the most frequent diagnosis, as it is in other vague acute abdominal conditions. There are a very few symptoms that may be expected, but the same symptoms may be seen in any number of other abdominal disorders. In other words, we may say there is no characteristic symptomatology of the condition. From a study of the cases recorded, we may expect to find severe and constant pain, vomiting in one-third of the cases, the presence of a hernia, the absence of temperature, (except late in the course of the disturbance from peritonitis) a tender and slightly distended abdomen, and constipation. Our case differed somewhat from these symptoms in that there was neither vomiting nor hernia, but there was an elevation of the temperature.

The prognosis is most favorable. Only three deaths occurred among the 57 cases reported; two died of postoperative pneumonia, and the third, being moribund at the time of the operation, died a few hours later.

It goes without saying that the treatment is essentially surgical and that the earlier the surgery the more satisfactory the result. Furthermore, if the abdomen is opened before the circulation of the involved omentum has been destroyed, the part of this organ distal to the point of the torsion, should be removed as a precautionary measure against its recurrence.

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Litthauer: (Cited by Keen) Berl. klin. Wochensehr., 1906, vol. 18, p. 454.
Kelly-Noble: Gynecology and Abdominal Surgery, W. B. Saunders Co., Philadelphia, 1908.
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Cinchophen B. P. C.—A brand of cinchophen—N. N. R. For a discussion of the actions, uses and dosage, see New and Nonofficial Remedies, 1924, p. 93. Benzol Products Co., Newark, N. J.

MISCELLANEOUS

AUSTIN.

Austin, "The City of the Violet Crown," capital of Texas, was located by a commission appointed by the Republic of Texas in 1836, and named after Stephen F. Austin, the Father of Texas. The present site of the city was selected because the commission had been instructed to pick the most attractive spot in Texas. The natural beauties of Austin impress themselves upon the traveler, and the seeker for beauty and rest can seclude himself away from the hum of busy streets.

Beginning right at the western and northwestern gates of the city and stretching away to the northwest, is a long range of semi-mountains. Cutting its way through this range for centuries, the Colorado river has flowed. High cliffs and peaks offer scenery for the pedestrian, autoist, or boatman. Beneath, in the cool waters of the river or mountain streams, are to be found untold quantities of the finny tribe. White perch, bass, buffalo, trout, and catfish furnish sport for the angler.

The climate of Austin is unsurpassed by any city or locality in the southwestern part of the United States. The city is completely drained and there is no standing water or swampy places.

STATE CAPITOL.

The altitude ranges from 509 to 700 feet in the city, and in the western part of the county the altitude ranges as high as 1,200 feet.

The city is supplied with pure water, which is secured by a complete system of filtration, and regular tests are made of the water in order to keep its purity constant.

Mean maximum temperature	77.8 deg. Fah.
Mean minimum temperature	57.6 deg. Fah.
Mean annual temperature	67.5 deg. Fah.
Average annual rainfall	33.10 inches
Average relative humidity	69.5 per cent.

COMPARATIVE POPULATION.

1850	629
1860	3,494
1870	4.428
1880	11,013
1890	14,575
1900	22,258
1910	29,860
1920	34,876
1925 City Directory	55,728

Austin is served by the Missouri, Kansas & Texas Ry. which gives special passenger service through the "Texas Special;" the International & Great Northern Railway, which gives special passenger service through the "Sunshine Special." These two special trains have a twenty-four hours' service to St. Louis and fifty-two hours' service to New York City. The

GOVERNOR'S MANSION.

Southern Pacific Lines offer excellent passenger service to all southern, western and eastern points.

Travis County has 1,374 miles of road. The City of Austin has 278 miles of street, more than 200 miles of which are kept in excellent condition.

Five national highways pass through Austin, connecting this city with all important points. These highways are Meridian, Southern National, King of Trails, Bankhead, and Colorado and Gulf.

The hilly and semi-mountains country west and northwest of Austin is net worked with automobile

BROW OF MT. BONNELL.

drives, where constant surprises are found as the scenery unfolds before the traveler. Among these drives of interest are the loop to Bee Cave, the road to Hammett's Crossing, Hamilton Pool, West Cave, the road to Cox's Crossing over the Swiss Alps and the Bull Creek Scenic Drive.

The aggregate wealth of the city is approximately $104,000.000.

The aggregate wealth of the rural part of the county is approximately $62,000,000.

The total bonded indebtedness of Austin is $3,297,500.

The assessed valuation of the county is $43,000,000, and of the city is $38,104,992.

UNIVERSITY OF TEXAS.

Austin has five banks, the combined resources of which total more than $27,000,000.

Bank clearings for 1924 totaled $107,298,465.89.

The city tax rate is $2.30 per $100.00, on a valuation of about 50 per cent., and the County and State rate is $1.68 per $100.00, on a valuation of about 25 per cent.

There are sixteen public ward schools in Austin and two high schools. Twenty-six per cent of the population in Austin is enrolled in the various schools. In addition to the public school system, there are the following institutions with the enrollment of each:

University of Texas, 5,044.

State School for the Deaf, 468.

State School for the Blind, 208.

State School for the Defective, 415.

St. Edward's College (Catholic) has an enrollment of 238.

St. Mary's Academy (Catholic) has an enrollment of 205.

Austin Military School (private) has a rapidly increasing enrollment.

Austin Public Schools, 8,367, with 257 additional at night school.

Other schools of importance are the Presbyterian Theological Seminary and Texas Wesleyan College.

Austin has 46 churches, Young Men's Christian Association Building at the University of Texas, and a Young Women's Christian Association Building in the city.

In addition to the great State educational institutions, the following eleemosynary institutions are also located in Austin: State Insane Asylum, and the Pasteur Institute. Through this latter institution thousands of lives have been saved.

The hospital facilities of Austin include the Seton Infirmary, the oldest hospital in Austin, situated at Twenty-sixth Street between Rio Grande and Nueces Streets. The hospital has a total of 125 beds and is equipped with all modern conveniences and up to date operating rooms, and is run by the Sisters of Charity.

The St. David's Hospital, located on Rio Grande Street, fifteen blocks from the heart of the city, is owned by the Episcopal Church. This hospital has 35 beds, a modern operating room and all conveniences.

The City Hospital is located on East Avenue, six blocks from the center of town. This hospital, which was erected in 1916, has a total of 70 beds and possesses one of the most modern operating rooms in the city.

The Scott-Gregg Emergency Hospital is located in the same block with the new Stephen F. Austin Hotel, which is in the heart of the city. The hospital is provided with every facility for the proper care of patients and is modern in every respect. Being an emergency hospital, it is provided with only 15 beds. Its operating room is furnished with the most up to date scientific equipment.

Points of Interest.

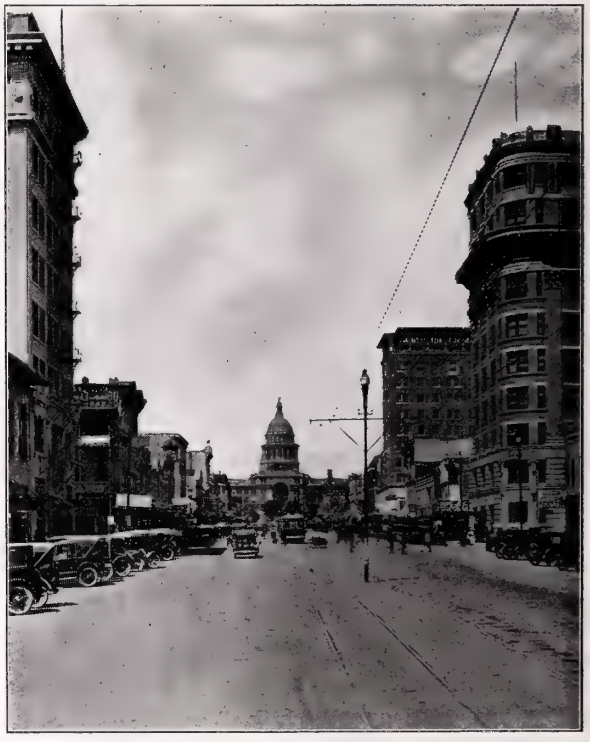
The State Treasury in the Capitol.

The Governor's Reception Room, with its Texas mesquite and cherry furniture. Second floor of Capitol.

The House of Representatives and the Senate Chamber with their notable paintings. Second floor of Capitol.

The Confederate Museum in the Old Land Office Building.

The Supreme Court. Third floor of the Capitol.



CONGRESS AVENUE.
One of Austin's Busy Business Streets.

The Museum of the Daughters of the Republic, containing many historical articles from the days of the Republic. Old Land Office Building, where O. Henry once worked.

Exhibits in the Agricultural Department of farm products, nuts, and all other Texas products. First floor, State Office Building.

The State University with its great library and many exhibits, churches, fraternities, and Y. M. C. A.

The Wrenn Library at the University of Texas, the gift of Major George W. Littlefield, with its 4,800 volumes, many of which are first editions of

the greatest authors, cost $250,000. It is the most notable collection in America. The Littlefield Collection of Southern History is also in this library. The Garcia collection deals with the History of Mexico, and was once owned by the foremost historian of Mexico.

The old home of the French Ambassador to Texas, the only building ever built by a foreign country in America, is on East Eighth Street.

No city in the South is richer in romance and history than the City of Austin. The following points of interest are merely suggestive of what can be found in this locality.

The great granite Capitol Building, 317 feet in height, built of Texas granite, covering six acres, and costing 3,000,000 acres of Texas land.

The State Library in the Capitol, containing old treaties between the Republic of Texas and foreign nations and a large amount of other historical material.

Travis Post No. 76, American Legion, has bought a beautiful and permanent home just off Sixth Street adjoining Deep Eddy, with a large front on the picturesque Colorado River. An opportunity was extended to citizens of Austin and Travis County to

AMERICAN LEGION HOME.

make this home a monument to ex-service men of Travis County. A roster of all men from the county, who participated in the World War, will be placed in the building. Club rooms will be maintained, and entertainments will be held for ex-service men at the home. A museum has been planned also, and ex-service men are invited to contribute war relics to this museum. In acquiring this home, the Travis Post is about to realize the greatest of its ambitions since the signing of the armistice.

Enfield, "The Place You Will Eventually Live," adjoins Pease Park and has some of the finest homes in the city and many beautiful drives.

Westfield and Travis Heights offer splendid homes located on a high elevation with unexcelled views and quick transportation.

Hyde Park with its high elevation, handsome old trees and well kept streets develops beauty on all sides.

Aldridge Place, "The Place Beautiful," is a University addition.

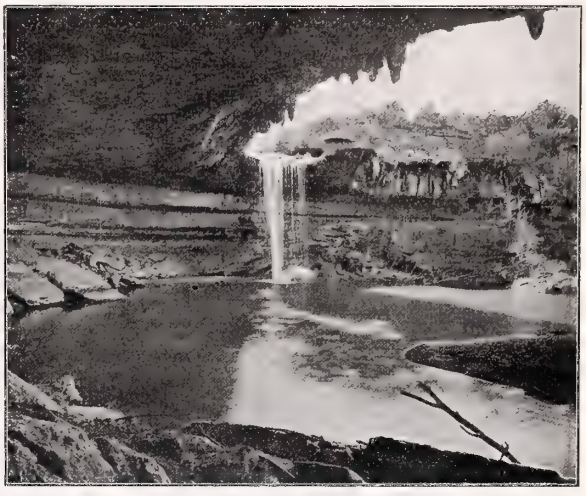
Country Club Addition is highly desirable.

Austin has 68 miles of sewer mains which reach every part of the city.

Manufactured gas is furnished by the Austin Gas and Light Co., which has one of the most modern plants in the entire south and has over 85 miles of mains.

There are 21 miles of street railway giving excellent service to all parts of Austin.

Austin has never been a boom town but has had a gradual and healthy growth. The area is 16 square miles. The building permits shown below give an



HAMILTON POOL.

idea of the constant expansion but they are not truly indicative of the growth of the city since no penalty is attached for not taking them out. In reality, over 1,200 homes were built in 1924. The State of Texas is completing the purchase of 132 acres of land in the heart of Austin. This land will be added to the present 40-acre campus of the University. The pur-

THE DRISKILL HOTEL.
Registration and Hotel Headquarters of the Annual Session, State Medical Association.

chase of this land will mean a great expansion in the way of more home building.

Year.	No. Permits.	Value.
1919	145	$ 249,773.84
1920	188	753,141.00
1921	461	1,167,667.50
1923	630	2,023,000.00
1924	482	1,445,615.00

The leading industries of Austin are the roasting of coffee, manufacture of flour, crude oil engines,

brick, mattresses and truck bodies, cottonseed oil, candy, butter, ice cream, castings, cigars, extracts, floor sweep, poultry remedies, milled charcoal, printing, ice, lime, monuments, mill work, saddles, trunks, soap, and optical lenses. The largest chili canning plant west of the Mississippi is located here. Carloads of dressed turkeys and chickens are shipped from Austin each year. Approximately 100 cars of pecans originate in Austin or are shipped from this territory by Austin firms.

Some of the industrial possibilities for Austin are plants for preparing pecan meats for market, cheese factories, condensed milk plants and textile mills. It should be borne in mind that Austin has

THE STEPHEN F. AUSTIN HOTEL.
Hotel Headquarters for State Medical Association Meeting.

a very large high class unutilized labor supply, and a vast amount of undeveloped water power.

The mild climate of Austin and the vast amount of feed stuffs produced at low cost make this a most desirable locality for the production of livestock and dairying. There are forty-four dairies in and around Austin.

The average production of cotton in Travis County is 60,000 bales. The corn production is 2,000,000 bushels annually. Immense crops of hay are produced. The area of Travis County is 654,000 acres of which 352,000 acres are in cultivation.

Austin is the largest producing point for spinach in the Southwest.

Adjacent to the city is Lake Austin—29 miles long, with boating, fishing and bathing. It is reached by automobile boulevard or street car. There are many beautiful camping sites.

Pease Park is just west of the Capitol. The shady slopes and grassy meadows offer quiet spots for rest.

The park at Barton Springs with its majestic pecan trees, and great artesian springs flowing fifteen million gallons of cold water daily, attracts thousands for the daily plunge.

Deep Eddy bathing beach is reached by street car line and is on the Lake Austin Boulevard. The huge pool of pure water, equipped with all mechanical devices, the neat cottages, band concerts, mov-

BARTON SPRINGS.
A Most Delightful Bathing Pool. These Springs Flow 15,000,000 Gallons of Water Daily.

ing pictures and clean moral atmosphere make this an unusually attractive resort.

Within the city are a number of small parks where band concerts are given through the summer. Among these are Lamar Park, Wooldridge Park, East Avenue Park and Tabernacle Park.

There are two theaters and six picture shows in the city.

LAKE AUSTIN DAM.

With its vast amount of water power soon to be utilized. The Colorado River offers the greatest opportunity for cheap water power in the State. This river flows more water on the average than any other river in Texas.

In the City of Austin and in the adjacent territory there are several deep wells and springs where water of the highest medicinal quality flows out in great abundance. Among these noted wells is the one which supplies the hot sulphur baths in the Perry building, also the deep well which supplies the baths of the Driskill Hotel. The Capitol well, located on the Capitol grounds, constantly flows a stream of mineral water for all those who wish to drink.

Eight miles northwest of Austin are the Champion wells, which water corresponds to that of Carlsbad.

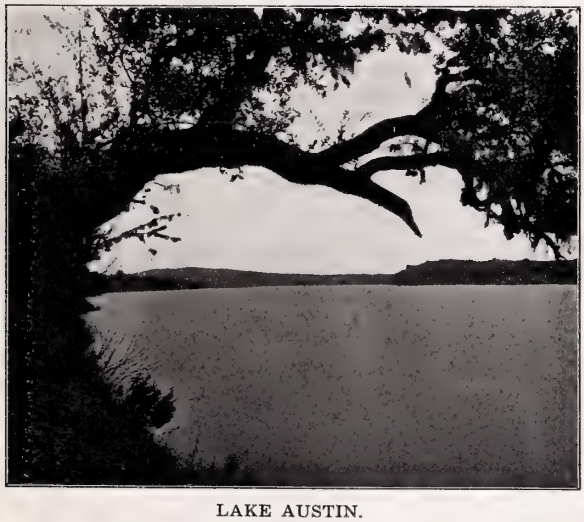
Barton Springs flows pure water of artesian origin. This is not a mineral water. The springs are used as a bathing resort.

East of the city are the wonderful R. and G. wells.

Austin with its contiguous territory offers many privileges to the camper or traveling tourist in the way of natural beauty and convenience for stopping places in making a camp. These spots have all been made very attractive by nature. The scenic beauty is unsurpassed. Great bluffs covered with live oak, cedar, mountain laurel, and wild flowers give varied

DEEP EDDY BATHING POOL.
One of the Most Delightful Resorts to be Found in the State.

For twenty-nine miles above the city Lake Austin reaches into the hills. This lake is formed by a dam 65 feet high and 1,275 feet long. On this lake in 1894, Stansbury, of Australia, won the world's championship in the international regatta. Innumerable pleasure boats, both large and small, extend



LAKE AUSTIN.

a cool welcome to the tourist and visitor. The bathing beaches are more popular than the seashore. Truly the traveler finds that Austin has not neglected the things of beauty and pleasure in the building of a city.

touches of beauty throughout the year. In the cool caves and caverns are found long fronds of sword and maiden-hair ferns. Plenty of fire wood is found at all of these camping spots, and at most of these places there are good fishing points without restrictions. Almost any part of this territory can be reached by automobile. Some of these camping places are Deep Eddy, Barton Springs, Bull Creek, Pease Park, Cox Crossing and Hammett's Crossing.

LOUISVILLE ALUMNI BANQUET.

Graduates of all Louisville medical colleges who are practicing medicine in the State of Texas, or who may be visiting in the State, are urged to attend the annual Louisville Alumni Banquet, to be held Tuesday night, May 5, in Austin, in connection with the Annual Session of the State Association. Information as to the hour and the place will be posted near the information bureau, on the mezzanine floor of the Driskill Hotel. Dr. George A. Hendon, Professor of Surgery in the University of Louisville, will be the honor guest. Dr. Hendon met with the alumni during the Galveston session of the State Medical Association, in 1916, and will be remembered as one of the wittiest and most entertaining speakers ever appearing at one of these banquets.

Dr. J. E. Gilcreest of Ennis, a past president of the State Medical Association of Texas, and one of the most beloved physicians in the State, will preside at the banquet.

There are 684 graduates of Louisville medical colleges practicing medicine in Texas, according to our present records.

C. P. Brokaw, M. D., Secretary,
Louisville Alumni Association of Texas.

Announcements and Program

OF THE

FIFTY-NINTH ANNUAL SESSION

OF THE

State Medical Association of Texas

May 5, 6 and 7, 1925

AUSTIN, TEXAS

OFFICERS

DR. M. F. BLEDSOE, President.....Port Arthur
DR. C. M. ROSSER, President-Elect.....Dallas
DR. S. J. ALEXANDER, Vice-President.....Hearne
DR. J. W. GIDNEY, Vice-President.....West
DR. P. H. CHILTON, Vice-President.....Comanche
DR. HOLMAN TAYLOR, Secretary.....Fort Worth
DR. K. H. BEALL, Treasurer.....Fort Worth

BOARD OF TRUSTEES

DR. M. L. GRAVES (four years).....Galveston
DR. JOHN S. TURNER (three years).....Dallas
DR. W. B. RUSS (two years).....San Antonio
DR. JOHN T. MOORE, Chm. (one year).....Houston
DR. W. R. THOMPSON, Secy. (term expires).....Fort Worth

COUNCILORS

First District

DR. W. L. BROWN[1] (two years).....El Paso

Second District

DR. P. C. COLEMAN (one year).....Colorado

Third District

DR. R. S. KILLOUGH (term expires).....Amarillo

Fourth District

DR. JOE E. DILDY (two years).....Brownwood

Fifth District

DR. C. S. VENABLE (term expires).....San Antonio

Sixth District

DR. F. U. PAINTER (term expires).....Corpus Christi

Seventh District

DR. JOE GILBERT (one year).....Austin

Eighth District

DR. O. S. McMULLEN (one year).....Victoria

Ninth District

DR. W. B. THORNING (one year).....Houston

Tenth District

DR. D. S. WIER (one year).....Beaumont

Eleventh District

DR. R. H. McLEOD (two years).....Beaumont

Twelfth District

DR. N. D. BUIE (term expires).....Marlin

Thirteenth District

DR. J. H. CATON (two years).....Eastland

Fourteenth District

DR. A. B. SMALL (two years).....Dallas

Fifteenth District

DR. J. K. SMITH (term expires).....Texarkana

1. Appointed to fill unexpired term of Dr. R. B. Homan, resigned.

DELEGATES TO A. M. A.

Delegates

DR. J. W. BURNS (one year).....Cuero
DR. A. C. SCOTT (one year).....Temple
DR. HOLMAN TAYLOR (term expires).....Fort Worth
DR. S. P. RICE (term expires).....Marlin
DR. JOE BECTON (term expires).....Greenville

Alternates

DR. THOMAS DORBANDT (one year).....San Antonio
DR. R. W. KNOX (one year).....Houston
DR. M. L. GRAVES (term expires).....Galveston
DR. H. F. CONNALLY (term expires).....Waco
DR. G. B. FOSQUE (term expires).....Waco

COUNCIL ON LEGISLATION AND PUBLIC INSTRUCTION

Dr. M. F. Bledsoe, Chairman (ex-officio), Port Arthur.
Dr. Holman Taylor, Secretary (ex-officio), Fort Worth.
Dr. W. B. Thorning (ex-officio), Houston.
Dr. C. M. Rosser (two years), Dallas.
Dr. I. C. Chase (two years), Fort Worth.
Dr. H. W. Cummings (two years), Hearne.
Dr. A. A. Ross (one year), Lockhart.
Dr. A. C. Scott (one year), Temple.
Dr. W. B. Russ (one year), San Antonio.
Dr. Joe Becton (term expires), Greenville.
Dr. S. E. Thompson (term expires), Kerrville.
Dr. A. F. Beverly (term expires), Austin.

COUNCIL ON MEDICAL DEFENSE

Dr. W. D. Jones, Chairman (two years), Dallas.
Dr. Holman Taylor, Sec. (ex-officio), Fort Worth.
Dr. A. P. Howard (three years), Houston.
Dr. F. P. Miller (one year), El Paso.
Dr. W. A. King*, San Antonio.

COMMITTEES

Committee on Scientific Work.

Dr. E. V. DePew, Chairman, San Antonio.
Dr. W. F. Thomson, Beaumont.
Dr. C. P. Yeager, Kingsville.
Dr. Curtice Rosser, Dallas.
Dr. A. C. Scott, Jr., Temple.

Committee on Collection and Preservation of Records.

Dr. Frank Paschal, Chairman, San Antonio.
Dr. M. L. Graves, Galveston.
Dr. J. D. Osborn, Cleburne.
Dr. S. P. Rice, Marlin.
Dr. John T. Moore, Houston.

Committee on Memorial Exercises.

Dr. D. M. Higgins, Chairman, Gainesville.
Dr. Geo. M. Decherd, Austin.
Dr. C. U. Patterson, Houston.
Dr. Bacon Saunders, Fort Worth.
Dr. R. D. Cousins, Pineland.

Committee on Transportation.

Dr. Holman Taylor, Chairman, Fort Worth.
Dr. F. P. Miller, El Paso.
Dr. N. A. Poth, Seguin.
Dr. F. W. Lawson, Orange.
Dr. T. J. Bennett, Austin.

Committee on Arrangements for the Annual Session.

Dr. Joe Gilbert, Chairman, Austin.
Dr. Dalton Richardson, Austin.

*Unofficially appointed a member of the Council, anticipating the adoption of an amendment to the Constitution providing for an additional member.

Dr. Goodall H. Wooten, Austin.
Dr. S. E. Hudson, Austin.
Dr. W. Neal Watt, Austin.

Committee on Publicity.

Dr. Ralph E. Cloud, Chairman, Austin.
Dr. M. P. Smart, Austin.
Dr. Robt. W. Shipp, Austin.
Dr. G. M. Graham, Austin.
Dr. Z. T. Scott, Austin.

Committee on Scientific Exhibits.

Dr. R. E. B. Bledsoe, Chairman, Taylor.
Dr. J. H. McLean, Fort Worth.
Dr. Nowlin Watson, Clarksville.
Dr. J. H. Lander, Victoria.
Dr. C. H. Brownlee, Austin.

Committee on Medical Education.

Dr. Marvin L. Graves, Chairman, Galveston.
Dr. C. R. Hannah, Dallas.
Dr. John H. Burleson, San Antonio.
Dr. R. S. Killough, Amarillo.
Dr. C. C. Cody, Houston.

Committee on Hospital Standardization.

Dr. H. F. Connally, Chairman, Waco.
Dr. Homer T. Wilson, San Antonio.
Dr. F. P. Miller, El Paso.
Dr. H. L. D. Kirkham, Houston.
Dr. J. E. Thompson, Galveston.

Committee on Compensation and Health Insurance.

Dr. A. Philo Howard, Chairman, Houston.
Dr. Everett Jones, Wichita Falls.
Dr. B. A. Swinney, Breckenridge.
Dr. J. A. Gibson, Port Arthur.
Dr. H. B. Trigg, Fort Worth.

Committee on Cancer.

Dr. I. L. McGlasson, Chairman, San Antonio.
Dr. R. E. Barr, Orange.
Dr. Sydney J. Wilson, Fort Worth.
Dr. A. C. Scott, Temple.
Dr. W. T. Dunning, Cuero.

Committee on Health Problems in Education.

Dr. W. C. Goddard, Chairman, Austin.
Dr. J. M. Frazier, Belton.
Dr. R. B. Ehlinger, College Station.
Dr. J. J. Terrill, Dallas.
Dr. Dru McMicken, Beaumont.

Committee on Revision of Constitution and By-Laws.

Dr. M. F. Bledsoe (ex-officio), Port Arthur.
Dr. C. M. Rosser (ex-officio), Dallas.
Dr. Holman Taylor (ex-officio), Fort Worth.
Dr. John T. Moore, Houston.
Dr. A. C. Scott, Sr., Temple.
Dr. Joe Becton, Greenville.
Dr. F. P. Miller, El Paso.
Dr. W. B. Russ, San Antonio.
Dr. Winfred Wilson, Memphis.

SPECIAL DELEGATES

Texas Member of the National Legislative Council.

Dr. W. B. Thorning, Houston.

Texas Representative National Council on Medical Education.

Dr. M. L. Graves, Galveston.

Texas Delegate to the Association of American Medical Colleges.

Dr. Wm. Keiller, Galveston.

To the Texas State Dental Society.

Dr. R. S. Killough, Amarillo.

To the Texas Pharmaceutical Association.

Dr. W. B. Russ, San Antonio.

To the Arkansas Medical Society.

Dr. Joe Becton, Greenville.

To the Colorado State Medical Society.

Dr. W. D. Jones, Dallas.

To the Louisiana State Medical Society.

Dr. D. S. Wier, Beaumont.

To the New Mexico State Medical Association.

Dr. A. C. Scott, Sr., Temple.

To the Oklahoma State Medical Association.

Dr. J. H. Caton, Eastland.

To the Texas Association of Sanitarians.

Dr. N. D. Buie, Marlin.

LOCAL COMMITTEES

Committee on Arrangements.—Dr. Joe Gilbert, chairman; Drs. Dalton Richardson, Goodall H. Wooten, Ralph E. Cloud, F. P. McLaughlin, W. Neal Watt, S. E. Hudson, T. J. Bennett, T. C. Hairston.

Committee on Finance.—Dr. Will E. Watt, chairman; Drs. Lee E. Edens, H. B. Granberry, Geo. M. Decherd, J. R. Nichols, J. W. Bradfield, Ernest Krueger, W. E. Holtzclaw.

Committee on Halls.—Dr. C. W. Goddard, chairman; Dr. S. J. Clark, C. A. Mathews, C. Burford Weller, Louis H. Kirk, M. P. Smartt, C. C. Black.

Committee on Exhibits.—Dr. Summerfield Taylor, chairman; Drs. J. J. Brady, Clarence Weller, S. A. Woolsey, J. E. Howze, W. B. Black.

Committee on Lanterns.—Dr. G. H. Gilbert, chairman; Drs. J. W. Gibson, J. M. Loving, W. D. Lightfoot, W. A. Harper.

Committee on Alumni Banquets.—Dr. M. H. Boerner, chairman; Drs. J. H. Gullett, H. S. McKeown, J. C. A. Eckhardt, Chas. S. Gates.

Committee on Hotels—Dr. J. C. Thomas, chairman; Drs. Sam Key, Ben F. Jones, F. C. Gregg, P. E. Suehs, Wm. W. Greer.

Committee on Entertainment.—Dr. A. F. Beverly, chairman; Drs. J. W. McLaughlin, N. R. Jackson, C. H. Brownlee, Z. T. Scott, R. W. Shipp, H. L. Hilgartner, Claude Lauderdale, G. M. Graham, John Preston, J. T. Wilhite, Mary Elizabeth Roe.

Committee on Golf.—Dr. Z. T. Martin, chairman; Drs. R. W. Shipp, H. A. Scott, Summerfield Taylor, M. H. Boerner.

Committee on Public Lectures.—Drs. Joe S. Wooten, chairman; Drs. H. W. Harper, C. W. Goddard, W. E. McCaleb, T. O. Maxwell, F. B. Shuford.

Committee on Transportation.—Dr. H. S. McKeown, chairman; Drs. H. A. Scott, R. V. Murray, M. F. Kreisle, R. M. Wickline, Sam Haigler, T. R. Pettway.

Committee on Woman's Auxiliary.—Mrs. S. E. Hudson, chairman; Mesdames Joe Gilbert, T. J. Bennett, A. F. Beverly, Z. T. Scott, Geo. M. Decherd and Dalton Richardson.

THE WOMAN'S AUXILIARY OF THE STATE MEDICAL ASSOCIATION OF TEXAS

President, Mrs. Jno. O. McReynolds, Dallas; President-Elect, Mrs. S. A. Collum, Texarkana; Vice-Presidents, Mesdames Jack Watts, San Antonio, Roy Wilson, Houston, W. M. Gambrell, Belton, W. W. Waite, El Paso; Recording Secretary, Mrs. Henry Trigg, Fort Worth; Corresponding Secretary, Mrs. C. W. Simpson, Dallas; Treasurer, Mrs. W. M. Young, Dallas; Publicity Chairman, Mrs. F. D. Boyd, Fort Worth; Parliamentarian, Mrs. S. E. Hudson, Austin.

Announcements

BUSINESS.

The Registration Office will be in the main lobby of the Driskill Hotel, Sixth and Brazos streets, one block from Congress avenue.

An Information Bureau will be located in the main lobby of the Driskill Hotel, near the registration office, where information may be obtained concerning places of meeting, hotels, railroads, street cars, entertainments, etc. Badges and programs will be given out at the registration office. Members, guests and visitors are urged to register as soon as they arrive in the city.

The Opening Exercises will be held in the Senate Chamber of the State Capitol.

All other General Meetings, except the Memorial Exercises, will be held in Hall No. 1, Roof Garden, Stephen F. Austin Hotel. Memorial Exercises will be held in the First Baptist Church, corner of Tenth and Colorado streets.

The President's Reception will be held in the Roof Garden of the Stephen F. Austin Hotel.

The House of Delegates will meet in Hall No. 2, Elks' Club, corner of Seventh and Colorado streets.

The meetings of the Scientific Sections will be held as follows:

Hall No. 3, Ball Room, Driskill Hotel, Section on Medicine and Diseases of Children.

Hall No. 4, West Room, Stephen F. Austin Hotel, Section on Surgery.

Hall No. 5, East Room Stephen F. Austin Hotel, Section on Ophthalmology, Otology, Rhinology and Laryngology.

Hall No. 6, Odd Fellows Hall, corner of Seventh street and Congress avenue, Section on State Medicine and Public Hygiene.

Hall No. 7, Blue Room, Driskill Hotel, Sections on Radiology and Physiotherapy, and Gynecology and Obstetrics.

Hall No. 8, Small Dining Room, Driskill Hotel, will be held as a reserve place of meeting.

All mail and telegrams should be directed to the Information Bureau, care of the State Medical Association, Driskill Hotel, Austin, Texas. Members are urged to leave their names and local addresses with the Information Bureau immediately upon arrival, in order that mail and telegrams may be properly delivered.

Official announcements will be posted on bulletin boards at the Registration Office.

Commercial Exhibits will be displayed in the main lobby of the Driskill Hotel.

Dr. Summerfield Taylor, Austin, is chairman of the Committee on Exhibits, to whom application for space should be made. All exhibits will be required to comply with the advertising standards of the TEXAS STATE JOURNAL OF MEDICINE, which are practically identical with those of *The Journal of the American Medical Association.*

SOCIAL.

A Reception Committee representing the Woman's Auxiliary of the Travis County Medical Society will be on duty at the principal hotels and at the office of registration at the Driskill Hotel until noon of Wednesday, May 6th, for the purpose of receiving visiting women and furnishing them with such information as they may desire.

TUESDAY, MAY 5.

During the morning hours of Tuesday and Thursday no entertainments have been planned for the ladies. It is intended to allow this time for visiting, shopping and sightseeing, as may suit their pleasure. There will be local committees to welcome them at the following places of interest: Wrenn Library of the University of Texas; Daughters of the Confederacy Museum; Capitol, and Elizabeth Ney Studio. There are also the various state institutions, which may be of interest to some. Visitors will be welcome.

10:30 a. m., a meeting of the Executive Board of the Woman's Auxiliary of the State Medical Association will be held in the Elks' building.

5:00 to 7:00 p. m., there will be a Garden Party for doctors and their wives at Laguna Gloria, the home of Mr. and Mrs. H. H. Sevier. Mrs. Sevier will be remembered as Clara Driscoll, whose patriotic efforts saved the Alamo to Texas. The Sevier home on Lake Austin is one of the most beautiful estates in Texas. It is situated on the site chosen by Stephen F. Austin for his residence, and a visit to this place is a great privilege, which it is felt will be appreciated.

WEDNESDAY, MAY 6.

10:00 a. m., at the First Presbyterian Church, corner of Seventh and Lavaca streets, there will be a meeting of the Woman's Auxiliary of the State Medical Association. At this time reports from delegates will be heard and the election of officers held. The business side of this meeting will be for members of the Auxiliary. Others are invited to attend. The proceedings will be of interest to all.

1:00 p. m., a luncheon for the visiting ladies at the Country Club.

9:00 p. m., President's Reception and Ball, Roof Garden, Stephen F. Austin Hotel.

THURSDAY, MAY 7.

During the morning hours of Tuesday and Thursday, no entertainments have been planned for the ladies. It is intended to allow this time for visiting, shopping and sightseeing, as may suit their pleasure. There will be committees to welcome them at the following places of interest: Wrenn Library of the University of Texas; Daughters of the Confederacy Museum; Capitol, and Elizabeth Ney Studio. There are also the various State Institutions, which may be of interest to some. Visitors will be welcome.

4:00 to 6:00 p. m., Garden Party at the Governor's Mansion. This beautiful and historic old building will be open to the visitors during this entertainment, which is considered one of the most interesting features of the social program.

GOLF.

Physicians who care to play golf during their stay in Austin are invited to enter a tournament which will be in progress during the Annual Session. Prizes will be awarded to the players turning in the lowest scores (home club handicaps are requested).

More detailed information will be furnished later.

MEMORIAL SERVICES.

Memorial Services will be conducted by the Chairman of the Committee on Memorial Exercises, Dr. D. M. Higgins of Gainesville, in the First Baptist Church, corner of Tenth and Colorado streets, beginning at 8:00 p. m., Tuesday, May 5.

Alumni Banquets will be held Tuesday evening, May 5, as arranged by the Chairman of the Alumni Banquet Committee, Dr. M. H. Boerner, Austin. Under no circumstances will these dinners and meetings begin before the memorial exercises have concluded.

ALUMNI BANQUETS.

9:30 p. m., Tuesday, May 5, alumni banquets, reunions and other such gatherings, will be held as arranged by the chairman of the local Alumni Committee, Dr. M. H. Boerner, Austin. Tickets for the various events will be on sale near the Information Bureau in the main lobby of the Driskill Hotel. These events are scheduled to follow the Memorial Exercises, and under no circumstances should they begin before the hour set.

RATES.

Tickets will be on sale May 2-5, both dates inclusive, at one and one-half fare for the round trip, on the identification plan, with return limit May 9. Certificates will be furnished by county society secretaries or the State Secretary, to those who desire to purchase the reduced rate ticket. These certificates will entitle the holder, who must be a member, to purchase the round trip ticket for one and one-half fare, and by no other means may this reduced rate be secured. One certificate will suffice for any number of people dependent upon a member for support, and accounted as of his family.

OTHER MEETINGS.

The Texas Radiological Society, the Texas Railway Surgical and Hygienical Association and the State Pathological Society of Texas, will meet in Austin, Monday, May 4. Also, there will be a conference on health problems on the same day (Hall No. 6, Odd Fellows Hall), under the call of the State Health Officer, Dr. H. O. Sappington. Members of the State Medical Association are invited to attend any of these meetings. The programs of the meetings mentioned are published with the programs of the scientific sections (following).

HOTELS.

Alamo.—$1.50 to $2.00.

Avenue Hotel.—$1.50 to $2.00.

Cabiness House.—$1.00 single, without bath; $1.75 double, without bath; $1.50 single, with bath; $2.50 double, with bath.

Driskill Hotel.—$1.50 to $2.00, without bath; $2.50 to $6.00, with bath.

Randolph.—$1.00.

Stephen F. Austin.—Room with shower, one person, $2.50 to $5.00; room and bath, one person, $3.00 to $3.50, two persons, $5.00, capacity $7.50; special rooms, $8.00 to $12.00, capacity rate.

Sutor.—$1.25 to $1.50.

The Texas.—$1.50 to $2.50.

HOUSE OF DELEGATES

First Meeting, Tuesday, May 5, 1:30 p. m., Hall No. 2, Elks' Club.

1. Call to order.
2. Roll call and announcement of result.
3. Reading of minutes of previous meeting.
4. Appointment of Reference Committees:
   - (1) Reference Committee on Credentials.
   - (2) Reference Committee on Reports of Ofcers and Committees.
   - (3) Reference Committee on Resolutions and Memorials.
   - (4) Reference Committee on Finance.
   - (5) Reference Committee on Amendments to Constitution and By-Laws.
   - (6) Reference Committee on Scientific Work.
5. Report of Secretary.
6. Report of Treasurer.
7. Report of Board of Trustees.
8. Report of Board of Councilors.
9. Report of Council on Legislation and Public Instruction.
10. Report of Council on Medical Defense.
11. Report of Standing Committees:
    - Committee on Scientific Work.
    - Committee on Collection and Preservation of Records.
    - Committee on Memorial Exercises.
    - Committee on Transportation.
    - Committee on Arrangements for the Annual Session.
12. Report of Special Committees:
    - Committee on Publicity.
    - Committee on Scientific Exhibits.
    - Committee on Medical Education.
    - Committee on Hospital Standardization.
    - Committee on Compensation and Health Insurance.
    - Committee on Cancer.
    - Committee on Health Problems in Education.
    - Committee on Revision of Constitution and By-Laws.
13. Report of Special Delegates:
    - Texas Member of the National Legislative Council.
    - Texas Representative of the National Council on Medical Education.
    - Delegate to the Association of American Medical Colleges.
    - Delegate to the Texas State Dental Society.
    - Delegate to the Texas Pharmaceutical Association.
    - Delegate to the Arkansas Medical Society.
    - Delegate to the Colorado State Medical Society.
    - Delegate to the Louisiana State Medical Society.
    - Delegate to the New Mexico State Medical Association.
    - Delegate to the Oklahoma State Medical Association.
    - Delegate to the Texas Association of Sanitarians.
14. Presentation of Fraternal Delegates.
15. Report of Special Committees of the House.
16. Reading of Communications.
17. Reading of Memorials and Resolutions.
18. Unfinished Business.
19. New Business.
20. Reports of Reference Committees.
21. Election of Officers (morning of last day):
    - President-Elect.
    - Three Vice-Presidents.
    - Secretary.
    - Treasurer.
    - One Trustee.
    - Five Councilors.
    - Two Delegates to A. M. A.*
    - Two Alternate Delegates to A. M. A.*
    - Member Council on Medical Defense.
    - Three Members Council on Legislation and Public Instruction.
22. Selection of Time and Place of Next Annual Session.

RULES GOVERNING SCIENTIFIC PAPERS

Chapter X, By-Laws of the State Medical Association of Texas states:

Sec. 3. The order of sections, papers and discussions shall be followed as set forth in the Official Program issued from the office of the State Secretary, unless otherwise ordered by a General Meeting.

Sec. 4.—All addresses and papers coming before the Scientific Sections shall be presented in type-

*Representation from Texas, reduced to four, by action of the House of Delegates of the A. M. A., at Chicago, 1924.

written manuscript. All papers so presented by members of the Association must first have been read before the county or, when such county societies are, for any reason, not available, district societies of which the authors are members, and the secretary of such society shall certify to the section secretary or chairman that such papers have been read in toto.

Sec. 5. No paper or address coming before the Scientific Section shall occupy more than twenty minutes in delivery, and discussions shall be limited to five minutes each.

Sec. 6. All papers read before the Scientific Section shall be the property of the Association, and they shall be deposited with the secretary of the section before which they are read. No member shall present a paper before more than one section at any Annual Session. Papers previously published as original in other medical publications, shall not be eligible to publication in THE TEXAS STATE JOURNAL OF MEDICINE, except on direction of the Board of Trustees.

It is obvious that no Section Chairman is empowered to entertain a motion to extend an author's time, and set aside the By-Laws, when such motion would infringe upon the rights and privileges of other authors.

First Day, Tuesday, May 5

GENERAL MEETING—OPENING EXERCISES

10:30 a. m.,

Senate Chamber, State Capitol.

Call to Order and Announcements, Chairman Arrangement Committee.....Dr. Joe Gilbert
Invocation.....Dr. Valentine Lee
Music.
Address of Welcome on Behalf of Austin.....Mayor W. D. Yett
Address of Welcome on Behalf of Travis County Medical Society.....Dr. G. M. Decherd
Address.....Dr. W. M. W. Splawn
Response and President's Address....Dr. M. F. Bledsoe
Music.
Benediction.....Rev. George Green

SECTION ON MEDICINE AND DISEASES OF CHILDREN.

1:00 to 5:00 p. m., Hall No. 3,

Large Dining Room, Driskill Hotel.

DR. CHAS. M. HENDRICKS, Chairman.....El Paso
DR. C. W. STEVENSON, Secretary.....Wichita Falls

1. *Chairman's Address.*
2. *The Use of Acidified Cow's Milk as a Food for Infants.*
   Dr. Jack F. Perkins.....Dallas
   Discussion opened by Drs. Roscoe Etter of Waco and L. D. Hill of San Antonio.
3. *Hypertrophic Stenosis in Infancy: Medical and Surgical Treatment.*
   Drs. J. C. A. Guest, Q. B. Lee and Everett Jones.....Wichita Falls
   Discussion opened by Drs. David Greer of Houston, and P. E. Luecke of Dallas.
4. *Direct and Differential Diagnosis of Thymus Hyperplasia in Early Infancy.*
   Dr. S. R. Kaliski.....San Antonio
   Discussion opened by Dr. Ralph Spence, Dallas.
5. *Study of Apparently Healthy Children of School Age Who are Highly Sensitized to Tuberculin: Preliminary Report.*
   Dr. Harry Leigh.....El Paso
   Discussion opened by Drs. David Greer, Houston, and Edwin G. Schwartz, Fort Worth.
6. *Some Phases of the Diagnosis of Pollen Hay Fever and Asthma.*
   Dr. I. S. Kahn.....San Antonio
   Discussion opened by Drs. T. C. Terrell, Fort Worth, and Geo. Turner, El Paso.
7. *Acidosis, Non-Diabetic.*
   Dr. Ramsey Moore.....Dallas
   Discussion opened by Drs. Geo. B. Cornick, San Antonio, and J. T. Perkins, Dallas.

(Section continued on Wednesday.)

SECTION ON STATE MEDICINE AND PUBLIC HYGIENE.

1:00 to 5:00 p. m., Hall No. 6,

Odd Fellows' Hall.

DR. A. H. FLICKWIR, Chairman.....Houston
DR. W. S. WINTERS, Secretary.....Port Arthur

1. *Chairman's Address.*
2. *Activities of the Texas State Department of Health.*
   Dr. H. O. Sappington, State Health Officer, ...Austin
   Discussion opened by Dr. Wm. Brumby, Houston.
3. *The Health Relationship of the White and Colored Races.*
   Dr. Oscar Dowling State Health Officer, ... New Orleans
   Discussion opened by Dr. John H. Florence, Houston.
4. *Public Health Nursing and the Medical Profession.*
   Mrs. Elizabeth Vaughan, Assistant Director, Nursing Service, Southwestern Division, American Red Cross.....St. Louis
   Discussion opened by Dr. L. H. Martin, Supervisor, City and County Health Officers, State Department of Health, Austin.
5. *Malaria and Mosquito Control Work.*
   Mr. J. E. LePrince, Senior Sanitary Engineer, U. S. P. H. S.....Memphis, Tenn.
   Discussion opened by Mr. V. M. Ehlers, State Sanitary Engineer, Austin.
6. *The Value of Physical Examination in Industry.*
   Mr. J. N. Redfern, Manager Relief, Medical, Employment and Pension Departments, C., B. & Q. R. R.....Chicago
   Discussion opened by Dr. A. Philo Howard, Houston.
7. *Public Health Problems of the Texas-Mexican Border.*
   Dr. John W. Tappan, Surgeon, U. S. P. H. S.....El Paso
   Discussion opened by Dr. H. O. Sappington, State Health Officer, Austin.
8. *Municipal Sanitation.*
   Dr. Robert Hasskarl, City Health Officer, ...Brenham
   Discussion opened by Dr. Z. T. Martin, City Health Officer, Austin.

(Section continued on Wednesday.)

SECTION ON SURGERY.

1:00 to 5:00 p. m., Hall No. 4,

Marie Antoinette Room, Stephen F. Austin Hotel

DR. S. P. CUNNINGHAM, Chairman.....San Antonio
DR. A. F. LUMPKIN, Secretary.....Amarillo

1. *Chairman's Address.*
2. *The Management of Cases with Suppuration Within the Abdominal Cavity.*
   Dr. Albert O. Singleton.....Galveston
   Discussion opened by Dr. John S. McCelvey, Temple.
3. *An Operative Procedure for the Repair of Herniae Complicating Permanent Colostomies.*
   Dr. Frank L. Barnes.....Houston
   Discussion opened by Dr. H. R. Dudgeon, Waco.
4. *Cholecystectomy: End Results in One Hundred Cases.*
   Dr. L. W. Pollok.....Temple
   Discussion opened by Dr. C. H. Harris, Fort Worth.
5. *Minor Methods in Major Surgery.*
   Dr. C. M. Rosser.....Dallas
   Discussion opened by Dr. Gavin Hamilton, Houston.
6. *Local Anesthesia in Abdominal and Pelvic Surgery (Splanchnic) With Report of Cases.*
   Dr. Peyton R. Denman.....Houston
   Discussion opened by Dr. H. L. D. Kirkham, Houston.

(Section continued on Wednesday.)

SECTION ON OPHTHALMOLOGY, OTOLOGY, RHINOLOGY AND LARYNGOLOGY.

1:00 to 5:00 p. m., Hall No. 5,

West Room, Stephen F. Austin Hotel.

DR. E. L. GOAR, Chairman.....Houston
DR. O. H. JUDKINS, Secretary.....San Antonio

1. *Chairman's Address.*
2. *Asthenopia.*
   Dr. N. H. Bowman.....Waco
   Discussion opened by Drs. J. M. Woodson, Temple, and J. H. Burleson, San Antonio.
3. *Our Prognosis in Tonsillar Operations.*
   Dr. A. J. Caldwell.....Amarillo
   Discussion opened by Drs. Turner F. Roberts, Paris, and O. H. Judkins, San Antonio.
4. *The Responsibility of the General Practitioner in Connection with the Diagnosis of Acute and Chronic Glaucoma.*
   Dr. John O. McReynolds.....Dallas
   Discussion opened by Drs. Thos. W. Crowder, Sherman, and Albert L. Anderson, Brownwood.
5. *Choroiditis: Report of a Case from Disease of the Ethmoids and Sphenoid.*
   Dr. Edgar H. Vaughn.....Tyler
   Discussion opened by Drs. Edgar Gough, Waxahachie, and P. E. Suehs, Austin.
6. *An Analysis of One Hundred Cases of Uveitis.*
   Dr. F. H. Newton.....Dallas
   Discussion opened by Drs. C. P. Schenck, Fort Worth, and O. R. O'Neil, Paris.
7. *The Use of Cross Cylinders in Refraction.*
   Dr. V. R. Hurst.....Longview
   Discussion opened by Drs. G. M. Duckworth, Cuero, and F. J. Slataper, Houston.

(Section continued Wednesday.)

SECTION ON RADIOLOGY AND PHYSIOTHERAPY

1:00 to 5:00 p. m., Hall No. 7,

Ball Room, Driskill Hotel

DR. R. T. WILSON, Chairman.....Temple
DR. ROBT. H. MILWEE, Secretary.....Dallas

1. *Chairman's Address.*

CONFERENCE ON THYROTOXICOSIS.

Conducted by Dr. Chas. L. Martin, Dallas.

2. *The Internist.*
   Dr. David Carter.....Dallas
3. *The Surgeon.*
   Dr. James E. Thompson.....Galveston
4. *The Radiologist.*
   Dr. Benjamin H. Orndorff.....Chicago
   Discussion opened by Drs. Alvis E. Greer and C. P. Harris, Houston, and G. D. Mahon, Dallas.

CONFERENCE ON PEPTIC ULCER.

Conducted by Dr. Davis Spangler, Dallas.

5. *The Internist.*
   Dr. K. H. Beall.....Fort Worth
6. *The Surgeon.*
   Dr. W. B. Russ.....San Antonio
7. *The Radiologist.*
   Dr. Russel D. Carman.....Rochester, Minn.
   Discussion opened by Drs. W. B. Thorning, Houston, and R. W. Baird, Dallas.

(Section continued on Wednesday.)

MEMORIAL EXERCISES

8:00 to 9:00 p. m.

First Baptist Church

Organ Prelude, "Evening Songs" (Johnston).
Miss Irene Maddox.....Austin

Vocal Solo (Selected).
Mr. J. A. Stevenson.....Austin

Reading Names of Deceased.
Chairman Committee on Memorial Exercises,
Dr. D. M. Higgins.....Gainesville

Memorial Address.
Dr. D. M. Higgins.....Gainesville

Quartette, "Come Where the Lilies Bloom" (Marks).
Mrs. R. J. Hank, Miss Mattie Yancey, J. A. Stevenson and Anton Berkman.....Austin

Violin, "Melody" (Fritz Kreisler).
Miss Anna Frances Griffith.....Austin

Organ, "Adoration" (Borowski).
Miss Irene Maddox.....Austin

Second Day, Wednesday, May 6

SECTION ON MEDICINE AND DISEASES OF CHILDREN—Continued

9:00 to 3:30 p. m., Hall No. 3,

Large Dining Room, Driskill Hotel

8. *Tumors of the Lung.*
   Dr. Willis W. Waite.....El Paso
   Discussion opened by Dr. G. Werley, El Paso.

9 *Differential Diagnosis of Pulmonary Tuberculosis.*
Dr. Alvis E. Greer.....Houston
Discussion opened by Dr. Wm. C. Farmer, San Antonio.

10. *Pulmonary Syphilis.*
Dr. J. H. Agnew.....Houston
Discussion opened by Drs. Harold Freed, Dallas, and M. D. Levy, Houston.

11. *Teaching and Control of the Tuberculous Patient.*
Dr. Wm. H. Ross.....Houston
Discussion opened by Dr. S. E. Thompson, Kerrville.

12. *Broncho-Pulmonary Spirochetosis.*
Dr. Harold Freed.....Dallas

13. *Dental Infections and Tuberculosis.*
Dr. Chas. C. Browning.....Los Angeles, Calif.

14. *Insulin and Acidosis.*
Dr. F. D. Garrett.....El Paso
Discussion opened by Dr. R. W. Baird, Dallas.

15. *Foetal Protein Intoxication: Preliminary Report.*
Dr. Will S. Horn.....Fort Worth
Discussion opened by Dr. W. E. Nesbit, San Antonio.

16. *Diagnostic and Therapeutic Proctology for the General Practitioner and Surgeon.*
Dr. Louis A. Buie.....Rochester, Minn.
Discussion opened by Drs. H. G. Walcott and Curtice Rosser, Dallas.
(Section continued on Thursday.)

SECTION ON SURGERY—Continued

9:00 a. m. to 4:00 p. m., Hall No. 4,

Marie Antoinette Room, Stephen F. Austin Hotel

7. *Perforating Duodenal Ulcers, with Report of Cases.*
Dr. John W. Burns.....Cuero
Discussion opened by Dr. Jno. T. Moore, Houston.

8. *Duodenal Ileus.*
Dr. A. B. Small.....Dallas
Discussion opened by Dr. W. Burton Thorning, Houston.

9. *The Need for More Intelligent Co-operation Between the Internist and the Surgeon in the Treatment of Duodenal Ulcer.*
Dr. W. B. Russ.....San Antonio
Discussion opened by Dr. Frank C. Beall, Fort Worth.

10. *Factors Essential to Good End Results in Gastric Surgery.*
Dr. M. W. Sherwood.....Temple
Discussion opened by Dr. H. M. Doolittle, Dallas.

11. *Peri-Arterial Sympathectomy.*
Dr. C. S. Venable.....San Antonio
Discussion opened by Dr. Sam Webb, Jr., Dallas.

12. *Reconstruction Operations of the Hip Joint.*
Dr. Willis C. Campbell.....Memphis, Tenn.
Discussion opened by Dr. J. R. Bost, Houston.

13. *Fractures About the Elbow Joint (Lantern Slides).*
Dr. Ben L. Schoolfield.....Dallas
Discussion opened by Dr. Curtice Rosser, Dallas.

14. *The Value of Sodium Chloride and Enterostomy in the Treatment of Acute Intestinal Obstruction.*
Dr. Pen Riddle.....Dallas
Discussion opened by Dr. J. Allen Kyle, Houston.

15. *The Treatment of Acute Brain Injuries.*
Dr. C. C. Nash.....Dallas
Discussion opened by Dr. E. R. Carpenter, Dallas.
(Section continued on Thursday.)

SECTION ON OPHTHALMOLOGY, OTOLOGY, RHINOLOGY AND LARYNGOLOGY

—Continued

9:00 a. m. to 12:00 m., Hall No. 5,

West Room, Stephen F. Austin Hotel

8. *Differential Diagnosis of Operative and Non-Operative Chronic Otitis Media.*
Dr. T. J. Walthal.....San Antonio
Discussion opened by Drs. Sam Key, Austin, and Edgar G. Mathis, Corpus Christi.

9. *Dystrophy of the Cornea: Report of a Case, with Slit Lamp Findings.*
Drs. H. L. Hilgartner, Austin, and S. C. Applewhite, San Antonio.
Discussion opened by Drs. Carl Hartman, Austin, and Ray K. Daily, Houston.

10. *Ocular Tuberculosis (Lantern Demonstration).*
Dr. W. C. Finnoff.....Denver
Discussion opened by Drs. John O. McReynolds, Dallas, and Ray K. Daily, Houston.

11. *Total and Reserve Accommodation in Presbyopia.*
Dr. F. J. Slataper.....Houston
Discussion opened by Drs. W. C. Finnoff, Denver, and F. H. Newton, Dallas.

12. *Asthma in Relation to Sinus Disease in Children.*
Dr. John L. Jenkins.....Dallas
Discussion opened by Drs. Simon Clark, Austin, and H. L. Warwick, Fort Worth.

13. *Clinic at State Institute for the Blind, 1:00 to 3:00 p. m.*
Supervised by Dr. H. L. Hilgartner.....Austin
(Bring ophthalmoscopes.)
(Section continued on Thursday.)

SECTION ON STATE MEDICINE AND PUBLIC HYGIENE—Concluded

9:00 a. m. to 4:00 p. m., Hall No. 6,

Odd Fellows Hall

9. *Control of Communicable Diseases from the Health Officer's View.*
Dr. L. H. Martin, Supervisor of City and County Health Officers, State Board of Health.....Austin
Discussion opened by Dr. D. Berrey, County Health Officer, San Antonio.

10. *Public Health and the Practice of Medicine.*
Mr. Homer N. Calver, Secretary, A. P. H. A.....New York
Discussion opened by Dr. C. W. Goddard, University of Texas, Austin.

11. *Stamping Out Tuberculosis in Live Stock.*
Dr. W. A. King, City Health Officer, ...San Antonio
Discussion opened by Prof. Geo. P. Grout, Texas A. & M. College, College Station.

12. *State-Wide Milk Sanitation.*
Mr. Leslie C. Frank, Sanitary Engineer, U. S. P. H. S.....Montgomery, Ala.
Discussion opened by Dr. Oscar Dowling, New Orleans.

13. *Typhus Fever.*
Dr. Kenneth Maxcy, Assistant Surgeon, U. S. P. H. S.....Washington, D. C.
Discussion opened by Dr. M. D. Levy, Houston.

14. *Organization and Administration of Municipal Health Departments.*
Dr. John W. Brown, City Health Officer, ...El Paso
Discussion opened by Dr. W. A. King, City Health Officer, San Antonio.

15. *Results Attained Through Enforcement of Federal Regulations Governing Water Supplies of Interstate Carriers.*
Mr. R. E. Tarbett, Sanitary Engineer, U. S. P. H. S.....El Paso
Discussion opened by Mr. E. G. Eggert, Department of Sanitary Engineering, Texas State Board of Health, Austin.

16. *The Present Status of Tuberculosis Control in the United States.*
Mr. Arthur Strawson, National Tuberculosis Association.....New York
Discussion opened by Dr. Z. T. Scott, Austin.

17. *Physical Education in Schools in Relation to the Medical Profession.*
Mr. Burton A. McGlachlin, Director, Physical Education, Port Arthur Schools, ...Port Arthur
Discussion opened by Dr. T. O. Woolley, Supervisor, Hygiene in Public Schools, Houston.

18. *Health Education in Public Schools.*
Prof. W. A. Buice, Department Public Health, Baylor University.....Waco
Discussion opened by Dr. John W. Brown, City Health Officer, El Paso.

19. *Some Observations of Vaccination: Report of 15,000 Cases.*
Dr. T. O. Woolley, Supervisor Hygiene in Public Schools.....Houston
Discussion opened by Dr. Dru McMickin, Health Officer, Beaumont.

20. *The Relation of the State Live Stock Sanitary Commission to the Public Health.*
Dr. N. F. Williams, State Veterinarian, ...Fort Worth

(Section adjourned.)

SECTION ON RADIOLOGY AND PHYSIOTHERAPY—Concluded

9:00 a. m. to 12:00 m., Hall No. 7,

Ball Room, Driskill Hotel

CONFERENCE ON BREAST CARCINOMA

Conducted by Dr. I. Warner Jenkins, Waco.

8. *The Internist.*
Dr. S. Ross Jones.....Waco

9. *The Surgeon.*
Dr. W. L. Crosthwait.....Waco

10. *The Radiologist.*
Dr. Jesse B. Johnson.....Temple

11. *Roentgen Diagnosis of Pulmonary Tuberculosis.*
Dr. J. W. Cathcart.....El Paso
Discussion opened by Dr. J. M. Martin, Dallas.

12. *The Ultra Violet Light: Case Report Showing Photosensitization.*
Dr. C. F. Lehman.....San Antonio
Discussion opened by Dr. E. D. Crutchfield, Galveston.

13. *X-Ray Diagnosis and Treatment of a Case of Multiple Myeloma.*
Dr. A. L. Roberts.....Fort Worth
Discussion opened by Dr. M. E. Gilmore, Fort Worth.

(Section adjourned.)

SECTION ON GYNECOLOGY AND OBSTETRICS

1:00 to 4:00 p. m., Hall No. 7,

Ball Room, Driskill Hotel

DR. J. W. BOURLAND, Chairman.....Dallas
DR. ROBT. A. JOHNSTON, Secretary.....Houston

1. *Chairman's Address.*

2. *Better Obstetrics.*
Dr. Irving T. Cutter.....San Antonio
Discussion opened by Drs. F. J. Iiams, Houston, and J. C. A. Guest, Wichita Falls.

3. *Conservative Obstetrics.*
Dr. G. B. Foscue.....Waco
Discussion opened by Drs. Minnie C. O'Brien, San Antonio, and G. H. Spurlock, Houston.

4. *Treatment of Puerperal Sepsis, with Report of Cases.*
Dr. H. Reid Robinson.....Galveston
Discussion opened by Drs. G. V. Morton, Fort Worth, and W. W. Greenwood, Navasota.

(Section continued on Thursday.)

GENERAL MEETING

4:00 to 5:30 p. m., Hall No. 3,

Roof Garden, Stephen F. Austin Hotel

Address: "Cancer, a Combined Lay and Medical Problem."
Dr. I. L. McGlasson, Chairman Cancer Committee.....San Antonio

Diagnosis and Treatment of Cancer, Upper Right Quadrant.
(From the Section on Medicine and Diseases of Children.)
Dr. M. L. Graves.....Galveston

Rational Surgery of Cancer: Its Handicaps and Limitations.
(From the Section on Surgery.)
Dr. A. C. Scott.....Temple

Cancer Treatment: A Regional Question.
(From the Section on Gynecology and Obstetrics.)
Dr. Hugh Crouse.....El Paso

Radiation in Cancer Therapy.
(From the Section on Radiology and Physiotherapy.)
Dr. R. H. Millwee.....Dallas

Third Day, Thursday, May 7

SECTION ON MEDICINE AND DISEASES OF CHILDREN—Concluded

9:00 a. m. to 4:00 p. m., Hall No. 3,

Large Dining Room, Driskill Hotel

17. *A Newer Method for the Diagnosis of Gall-Bladder Disease.*
Drs. Gibbs Milliken and Lester Whitaker, ...Galveston
Discussion opened by Drs. Lee Rice, San Antonio, and Chas. Martin, Dallas.

18. *The Hurry Headache.*
Dr. H. M. Winans.....Dallas
Discussion opened by Dr. Lee Rice, San Antonio.

19. *Present Status of Insulin.*
Dr. Chas. T. Stone.....Galveston
Discussion opened by Drs. David W. Carter, Jr., Dallas, and W. E. Nesbitt, San Antonio.

20. *Diabetic Coma.*
Dr. S. H. Kahn.....Dallas
Discussion opened by Dr. F. D. Garrett, El Paso.

21. *Heart Pain.*
Dr. R. W. Baird.....Dallas
Discussion opened by Dr. A. E. Greer, Houston.

22. *Cardiac Infarcts.*
Dr. G. Werley.....El Paso
Discussion opened by Dr. R. W. Baird, Dallas.

23. *Uncommon Cardiac Arythmias.*
Dr. W. E. Nesbit.....San Antonio
Discussion opened by Dr. O. B. Keil, Wichita Falls.

24. *Meningitis.*
Drs. N. D. Buie and T. G. Glass.....Marlin
Discussion opened by Drs. M. W. Colgin, Waco, and C. T. Stone, Galveston.

25. *Influenza.*
Dr. Carl Lovelace.....Waco
Discussion opened by Dr. L. C. Tittle, Dallas.

26. *Human Amebiasis.*
Dr. Henning Kofoid.....Berkeley, Calif.
Discussion opened by Dr. W. H. Moursund, Dallas.
(Section adjourned.)

SECTION ON SURGERY—Concluded

9:00 a. m. to 4:00 p. m., Hall No. 4, Marie Antoinette Room, Stephen F. Austin Hotel

16. *Traumatism of the Head and Brain in Civil Practice.*
Dr. G. M. Hackler.....Dallas
Discussion opened by Dr. Clay Johnson, Fort Worth.

17. *Multiple Myeloma.*
Dr. M. E. Gilmore.....Fort Worth
Discussion opened by Dr. O. L. Norsworthy, Houston.

18. *Idiopathic Atony of the Bladder.*
Dr. R. S. Mallard.....Fort Worth
Discussion opened by Dr. A. I. Folsom, Dallas.

19. *Significance of Pus in the Urine.*
Dr. John L. White.....Houston
Discussion opened by Dr. R. R. Ross, San Antonio.

20. *Late Results Following Prostatectomy.*
Dr. Frank S. Schoonover.....Fort Worth
Discussion opened by Dr. H. McC. Johnson, San Antonio.

21. *Prolapse of the Rectum.*
Dr. J. W. Nixon.....San Antonio
Discussion opened by Dr. Hiram F. Phillips, San Antonio.

22. *Significance of Abdominal Pain.*
Dr. J. S. Hixson.....San Angelo
Discussion opened by Dr. Joseph A. Robertson, Dallas.

23. *The Unrecognized Compression Fracture of the Vertebra: Report of Cases, with Lantern Slides.*
Drs. W. L. and C. P. Brown.....El Paso
Discussion opened by Dr. R. W. Knox, Houston.

24. *The Art and Science of Surgery.*
Dr. E. E. Francis.....Memphis, Tenn.

25. *The Value of Routine Blood Pressure Determination in Major Surgery.*
Dr. R. Stuart Adams.....San Antonio
(Section adjourned.)

SECTION ON OPHTHALMOLOGY, OTOLOGY, RHINOLOGY AND LARYNGOLOGY —Concluded

9:00 a. m. to 4:00 p. m., Hall No. 5, West Room, Stephen F. Austin Hotel

14. *Zinc Ionization Treatment of Acute and Chronic Suppurative Otitis Media.*
Dr. H. L. Warwick.....Fort Worth
Discussion opened by Drs. Palmer Archer, Houston, and O. H. Judkins, San Antonio.

15. *Septic Phlebitis or Lateral Sinus Thrombosis.*
Dr. W. D. Jones.....Dallas
Discussion opened by Drs. John H. Foster, Houston, and Horace Ainsworth, Waco.

16. *Radical Operation on the Frontal Sinus (Lantern Demonstration).*
Dr. R. C. Lynch.....New Orleans
Discussion opened by Drs. E. H. Cary, Dallas, and John H. Foster, Houston.

17. *Naso-Pharyngeal Fibroma.*
Dr. A. F. Clark.....San Antonio
Discussion opened by Drs. J. W. Nixon and B. F. Stout, San Antonio.

18. *The Anatomical Explanation of Some of the Spheno-Palatine Ganglion Phenomena.*
Dr. C. C. Cody.....Houston
Discussion opened by Drs. Oscar E. Veatch, Fort Worth, and Palmer Archer, Houston.

19. *Some Practical Points in the Diagnosis and Treatment of Neuritis of the Fifth Pair of Cranial Nerves.*
Dr. J. M. Murphy.....Temple
Discussion opened by Drs. C. W. Flynn, Dallas, and C. C. Cody, Houston

20. *Endoscopic Experiences.*
Dr. C. P. Schenck.....Fort Worth
Discussion opened by Drs. George S. McReynolds, Temple, and Martin Taber, Dallas.
(Section adjourned.)

SECTION ON GYNECOLOGY AND OBSTETRICS —Concluded

9:00 a. m. to 4:00 p. m., Hall No. 7, Ball Room, Driskill Hotel

5. *Results of Treatment of Eclampsia and Nephritic Toxemia.*
Dr. Willard R. Cooke.....Galveston
Discussion opened by Drs. Laurie Mackechney, Wichita Falls, and C. C. Cade, San Antonio.

6. *Oservations and Experience with the Potter Version.*
Dr. H. W. Johnson.....Houston
Discussion opened by Drs. Calvin R. Hannah, Dallas, and I. T. Cutter, San Antonio.

7. *Intra-Cranial Hemorrhage in the Newborn, from the Standpoint of the Obstetrician.*
Dr. Edwin Davis.....Fort Worth
Discussion opened by Drs. Willard Cooke, Galveston, and F. O. Calaway, Houston.

8. *Synergistic Anesthesia in Obstetrics.*
Dr. F. A. Pierce.....Dallas
Discussion opened by Drs. C. H. Reese, Waco, and H. Reid Robinson, Galveston.

9. *Scopolamin Apomorphia Amnesia in Obstetrics.*
Dr. Lucien LeDoux.....New Orleans
Discussion opened by Drs. J. L. Jenkins, Galveston, and L. E. Kelton, Corsicana.

10. *Ovarian Hemorrhage.*
Dr. Frank Beall.....Fort Worth
Discussion opened by Drs. K. H. Aynesworth, Waco, and Hugh Crouse, El Paso.

11. *Non-Malignant Uterine Neoplasms with Special Reference to Radium Treatment.*
Dr. O. L. Norsworthy.....Houston
Discussion opened by Drs. A. C. Scott, Temple, and Frank L. Barnes, Houston.

12. *Newer Methods of Treatment in Gynecology.*
Dr. Elbert Dunlap.....Dallas
Discussion opened by Drs. L. H. Roddy, Waco, and W. B. Russ, San Antonio.

13. *Mechanical Support of the Uterus.*
Dr. M. S. Seeley.....Dallas
Discussion opened by Drs. G. A. Pagenstecher, San Antonio, and H. B. Pedigo, Beaumont.

14. *Tumors Complicating Pregnancy and Labor.*
Dr. Homer T. Wilson.....San Antonio
Discussion opened by Drs. J. W. Burns, Cuero, and C. W. Flynn, Dallas.

15. *Postoperative Care of Gynecological Cases.*
Dr. E. W. Bertner.....Houston
Discussion opened by Drs. Chas. Harris, Fort Worth, and J. B. Smoot, Dallas.

(Section adjourned.)

GENERAL MEETING

4:00 to 5:00 p. m., Hall No. 1,
Roof Garden, Stephen F. Austin Hotel

Introduction of Newly Elected Officers.

PROGRAM TEXAS RAILWAY SURGICAL AND HYGIENICAL ASSOCIATION

Hall No. 4, Marie Antoinette Room,
Stephen F. Austin Hotel
May 4, 10:00 a. m.

DR. N. A. POTH, President.....Seguin
DR. C. P. YEAGER, Vice-President.....Kingsville
DR. ROSS TRIGG, Secretary.....Fort Worth

1. *President's Address.*
Dr. N. A. Poth.....Seguin

2. *Burns.*
Dr. Irvin E. Colgin.....Waco

3. *My Ideal Railway Surgeon.*
James A. Jones, General Claims Agent, Fort Worth & Denver Railway....Fort Worth

4. *The Revised Report of the American Railway Association Committee on First Aid, Equipment, Treatment and Instructions.*
Dr. R. W. Knox.....Houston

5. *The Relationship Existing Between the Claims Department and the Railway Surgeon.*
W. L. Alexander, General Claims Agent, M., K. & T. Railway.....Dallas

6. *Primary Handling and Free Drainage of Extensive Traumatic Wounds.*
Dr. M. W. Sherwood.....Temple

PROGRAM STATE PATHOLOGICAL SOCIETY OF TEXAS

Hall No. 5, West Room, Stephen F. Austin Hotel
May 4, 10:00 a. m.

DR. B. F. STOUT, President.....San Antonio
DR. A. H. BRADEN, Vice-President.....Houston
DR. W. W. COULTER, Secretary.....Houston

1. *President's Address.*
Dr. B. F. Stout.....San Antonio

2. *Is the Pathologist Properly Appreciated?*
Dr. M. F. Bledsoe, President, State Medical Association of Texas.....Port Arthur

3. *Syphilitic Aortitis, with Presentation of Specimens.*
Dr. Willis W. Waite.....El Paso

4. *Cardiac Infarcts.*
Dr. G. Werley.....El Paso

5. *Basal Metabolism Determination.*
Dr. J. H. Black.....Dallas

6. *Tumors of the Nervous Tissue of the Adrenal Body.*
Dr. Henry Hartman.....Galveston

7. *Primary Carcinoma of the Liver, with Report of Four Cases.*
Dr. W. H. Hill.....San Antonio

8. *Pernicious Anaemia.*
Dr. J. G. Burns.....Cuero

9. *Business Meeting and Election of Officers.*

PROGRAM TEXAS RADIOLOGICAL SOCIETY

May 4, 10:00 a. m., Hall No. 7
Ball Room, Driskill Hotel

DR. DALTON RICHARDSON, President.....Austin
DR. EARL D. CRUTCHFIELD, Vice-President.....Galveston
DR. THOMAS B. BOND, Secretary.....Fort Worth

1. *President's Address.*
Dr. Dalton Richardson.....Austin

2. *The Art of Healing.*
Dr. I. Warner Jenkins.....Waco
Discussion opened by Dr. Dalton Richardson, Austin.

3. *Carcinoma of the Tonsil.*
Dr. R. E. Barr.....Orange
Discussion opened by Dr. R. T. Wilson, Temple.

4. *Radiographic Technique.*
Dr. J. M. Martin.....Dallas
Discussion opened by Dr. J. W. Cathcart, El Paso.

5. *High Voltage and Radium Therapy.*
Dr. S. C. Barrow.....Shreveport, La.
Discussion opened by Dr. J. B. Johnson, Temple.

6. *Choice of Radiation in a Given Case.*
Dr. R. H. Crockett.....San Antonio
Discussion opened by Dr. R. H. Millwee, Dallas.

7. *Common Condition in which X-Rays are Often Neglected.*
Dr. E. D. Crutchfield.....Galveston
Discussion opened by Dr. I. L. McGlasson, San Antonio.

8. *Chronic Radiodermatitis (Lantern Slides).*
Dr. J. C. Michael.....Houston
Discussion opened by Dr. J. M. Martin, Dallas.

9. *Radium Spools for the Treatment of Carcinoma of the Cervix.*
Dr. Chas. L. Martin.....Dallas
Discussion opened by Dr. O. L. Norsworthy, Houston.

10. *Dysfunction of the Thymus Gland in Infancy.*
Dr. W. G. McDeed.....Houston
Discussion opened by Dr. Chas. L. Martin, Dallas.

11. *Diagnosis and Treatment of a Few Interesting Cases (Lantern Slides).*
Dr. J. W. Torbett.....Marlin
Discussion opened by Dr. W. S. Hamilton, San Antonio.

12. *Chronic Obstruction of the Colon.*
Dr. W. H. Cade.....San Antonio
Discussion opened by Dr. I. Warner Jenkins, Waco.

13. *Cholecystography.*
Dr. Russell D. Carman.....Rochester, Minn.

14. *Diagnosis and Significance of the Pathological Appendix.*
Dr. Benjamin H. Orndorff.....Chicago

PROPOSED REVISION CONSTITUTION AND BY-LAWS.

The following has been submitted by the Committee on Revision of Constitution and By-Laws, for publication, in compliance with the present By-Laws:

CONSTITUTION.

Article I.—Name and Purposes.

Sec. 1. The name and title of this organization shall be the State Medical Association of Texas.

Sec. 2. The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Texas and to unite with similar associations of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members, and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

Article II.—Composition of the Association.

Sec. 1. This Association shall consist of the several component county medical societies, duly and constitutionally chartered, and its membership shall comprise only those members of said component county societies who have been duly elected; who have been reported to the office of the State Secretary as members, and for whom the State Secretary has received the annual per capita assessment, made in accordance with the By-Laws of the Association.

Sec. 2. Only white physicians legally registered to practice medicine in Texas, who do not hold themselves out as practitioners of sectarian medicine, and who subscribe to the Principles of Ethics of the American Medical Association, shall be admitted to membership; except that white medical officers of the Federal Government, and teachers in medical "Class A" schools, who do not practice medicine and who are not required to register under the Medical Practice Act of Texas, and who are for the time *bona fide* residents of the State of Texas, shall be eligible to membership.

Sec. 3. Any distinguished physician not a resident of this State, or any distinguished scientist not a physician and who is not eligible to membership in this Association, may become a "Guest" during any Annual Session on invitation of the President of this Association, and shall be accorded the privilege of participating in all of the scientific work and social activities for that session.

Sec. 4. Members of other state medical associations, the families of members of physicians entitled to register in any capacity at the annual sessions of this Association, or other reputable citizens who may be invited to attend any of the meetings of the Association, may be registered as "Visitors," and as such shall be privileged to participate in the several social and general activities of the session.

Article III.—Officers.

Sec. 1. The officers of this Association shall be a President, a President-Elect, three Vice-Presidents, a Secretary, a Treasurer, five Trustees, a Councilor for each Councilor District, and four members of the Council on Medical Defense.

Sec. 2. The President, President-Elect and Vice-Presidents, shall be elected for terms of one year each. The Secretary, Treasurer and Councilors, shall be elected for terms of three years each. The Trustees shall be elected for terms of five years each. The members of the Council on Medical Defense shall be elected for terms of three years each, in accordance with this Constitution and By-Laws. All officers shall serve until their successors are elected and installed.

Sec. 3. The officers of this Association shall be elected by the House of Delegates on the morning of the last day of the Annual Session, and no person shall be elected to any such office who is not in attendance on that Annual Session, and who has not been a member of the Association for the preceding two years.

Article IV.—Trustees.

Sec. 1. The business affairs of the Association shall be managed by a Board of Trustees, comprising five members, elected in accordance with this Constitution and By-Laws. All funds of the Association shall be subject to the exclusive control of the Board of Trustees, except as otherwise provided in this Constitution and By-Laws. The Board of Trustees shall decide all questions not specifically delegated to other authorities by this Constitution and By-Laws. It shall, in general, serve as a Board of Directors, within the meaning of the corporate laws of the State of Texas.

Article V.—Board of Councilors.

Sec. 1. A Board of Councilors, consisting of one member from each councilor district, is hereby constituted. All questions pertaining to medical ethics shall be referred to this Board, through channels and as provided for in this Constitution and By-Laws. The Board of Councilors shall have general supervision of component county societies, and district societies, and questions pertaining to such shall be referred to the Board, through channels, as provided for in this Constitution and By-Laws.

Article VI.—Council on Medical Defense.

Sec. 1. The Council on Medical Defense shall consist of four members, elected as provided for herein. The Secretary of the State Association shall be *ex-officio* a member of this council, and shall act as its secretary. This council shall have the authority to provide rules and regulations for the conduct of its own affairs, provided they do not conflict with any provisions of the Constitution and By-Laws of the State Association.

Sec. 2. The Council on Medical Defense, under the general supervision of the Board of Trustees, shall have charge of the legal affairs of the Association. It shall have exclusive charge of the defense of members of the Association who are charged with medical malpractice who desire its services, and who are, in the opinion of the Council on Medical Defense, entitled thereto.

ARTICLE VII.—SESSIONS AND MEETINGS.

Sec. 1. The Association shall hold an Annual Session, during which there shall be held not less than one general meeting daily, which shall be open to all registered members and guests.

Sec. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates at the preceding annual session, or by the executive council, and the said executive council shall have the authority to change both the time and place of meeting, or either, to meet unforeseen emergencies, as hereinafter provided.

Sec. 3. Special sessions of either the Association or the House of Delegates, or special meetings of either, shall be called by the President, at his discretion or on petition of thirty delegates.

ARTICLE VIII.—REFERENDUM.

Sec. 1. The general meeting of the Association may by a two-thirds vote of members present, order a referendum on any question pending before the House of Delegates.

Sec. 2. The House of Delegates may by a two-thirds vote submit any question to the general meeting for final decision.

Sec. 3. The House of Delegates shall submit to the general meeting for final decision any question which has been ordered in accordance with Section 1 and Section 2, of this article.

Sec. 4. Any question brought before the general meeting by operation of this article shall be decided by majority vote of members present.

ARTICLE IX.—HOUSE OF DELEGATES.

Sec. 1. The House of Delegates shall constitute the legislative body of the Association. The membership of the House of Delegates shall consist of (1) delegates, elected in accordance with this Constitution and By-Laws, and *ex-officio* (2), the President, Vice-President, Secretary and Treasurer; (3) Councilors; (4) Trustees, and (5) members of the Council on Medical Defense.

Sec. 2. The House of Delegates shall meet at the time of the annual session of the Association, in accordance with the By-Laws of the Association, and at such other times as may be provided for by the said By-Laws. A majority of the delegates registered at the annual session shall constitute a quorum.

ARTICLE X.—COMPONENT COUNTY SOCIETIES.

Sec. 1. Component county societies shall be organized under the direction of the Board of Councilors, where the best interests of the profession shall indicate. Charters shall be issued to said component county societies by the State Secretary, countersigned by the President of the Association, upon the direction of the Board of Councilors.

Sec. 2. When so organized, component county societies shall have general jurisdiction over the medical affairs within their respective territories, in accordance with the provisions of this Constitution and By-Laws.

ARTICLE XI.—COUNCILOR DISTRICTS AND DISTRICT SOCIETIES.

Sec. 1. The House of Delegates shall divide the State into appropriate councilor districts.

Sec. 2. The House of Delegates shall provide for the organization and chartering of such district societies as will promote the best interests of the profession. Such societies shall be composed only of members of component county societies of their respective councilor districts, and shall be exclusively scientific and educational in character.

ARTICLE XII.—SCIENTIFIC SECTIONS.

Sec. 1. The House of Delegates shall divide the scientific work of the Association into appropriate sections, and provide for their management.

ARTICLE XIII.—FINANCE.

Sec. 1. The finances of the Association shall be in the general charge and keeping and under the general management of the Board of Trustees, except as may be provided otherwise by this Constitution and By-Laws.

Sec. 2. The House of Delegates shall provide for an equal per capita assessment of component county societies, and for the proper distribution of the amount so raised into the several funds of the Association, as established by the Board of Trustees or the House of Delegates.

Sec. 3. The Association, through its Board of Trustees, shall invest its money in such manner as may seem wise, appropriating the profits accruing therefrom to the several funds of the Association.

Sec. 4. The Trustees shall have the authority to receive volunteer contributions, for specific or general purposes, and shall dispose of said contributions in accordance with the terms of the donors, or its own judgment in the instance there are no such terms.

Sec. 5. The Association, through its Board of Trustees, shall have the authority to disburse its funds, in accordance with this Constitution and By-Laws. All appropriations made by the House of Delegates, or acts requiring the expenditure of funds, shall be approved by the Board of Trustees before becoming effective.

ARTICLE XIV.—INCORPORATION.

Sec. 1. The Association shall have a common seal with power to break, change or renew the same at pleasure.

Sec. 2. The Association shall have the authority to take out papers of incorporation under the corporate laws of the State of Texas.

Sec. 3. Component county societies shall have the authority to take out papers of incorporation, provided that said incorporation does not remove the said component county societies from the jurisdiction of this Association.

Sec. 4. The Association year shall be from January 1 to December 31, both dates inclusive. Membership shall be for the Association year. The fiscal year shall be established by the Board of Trustees.

ARTICLE XV.—AMENDMENTS.

Sec. 1. The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at any annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, published in the official organ of the Association, and sent officially to each component county society at least two months before the session at which final action is to be taken.

Sec. 2. A complete revision of this Constitution may be accomplished by a two-thirds vote of the House of Delegates at any annual session, provided that such complete revision shall have been adopted in the preceding session, and the revised version shall have been published in the TEXAS STATE JOURNAL OF MEDICINE not later than approximately three months prior to the annual session in which the final vote thereon is to be taken.

BY-LAWS.

Chapter I.—Membership.

Sec. 1. The qualifications and requirements for membership shall be as stated in Article II, Sections 1 and 2, of the Constitution of this Association.

Sec. 2. All members of component county societies shall, by virtue of their membership, be members of this Association, when duly reported to the State Secretary by the secretaries of their respective county societies. The name of a physician on the properly certified roster of members of a component county society which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

Sec. 3. Members who are under sentence of suspension or expulsion from a component county society, or whose names have been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, and they shall not be permitted to take part in any of its proceedings until they have been relieved of such disability. Any member dropped from the rolls of a component county society for non-payment of dues, is to be considered as coming within the provisions of this section.

Sec. 4. Secretaries of component county societies shall promptly notify the State Secretary of the relief of any disability, suffered by any of their members. Said notification shall be in writing, and the State Secretary shall in like manner acknowledge receipt of such notice, informing the county society's secretary of the steps that have been taken to correct the record of such members, in his office.

Sec. 5. A member in attendance at the annual session shall verify his name on the certified roster of the component county society of which he is a member, when he shall receive a badge, which shall be evidence of his right to all the privileges of membership during that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provision of this section.

Chapter II.—Officers.

Sec. 1. The officers of the Association shall be as stated in Article III, Section 1, of the Constitution of this Association.

Sec. 2. The President shall be the real head of the medical profession of the State during his term of office. He shall, as far as practicable, visit the various sections of the State in the interest of the Association and its component societies, and the public health, in co-operation with the councilors of the State Association. In general, the President shall perform such other duties as custom and parliamentary usage may require. He shall preside at all meetings of the Association and of the House of Delegates, deliver an address to the Association during its annual session, and appoint all committees and fill all vacancies in office not otherwise provided for in this Constitution and By-Laws. He shall co-operate with officers, committees and councils of the Association, in the performance of their several duties, and shall endeavor to so co-ordinate the several activities of the Association, through the constituted agencies, that the maximum good results may be attained during his term of office. The trustees shall include in the annual budget a reasonable sum to cover the expenses of the President in complying with these requirements.

Sec. 3. The President-Elect shall assist the President in the performance of his duties, and shall seek and be extended, the opportunity to thoroughly familiarize himself with the duties of the office of President, which office he will automatically fill at the expiration of his term as President-Elect. On the death or removal of the President, the President-Elect shall within ten days assemble the Board of Councilors for the purpose of selecting his successor in office, which selection shall be from the group of regularly elected vice-presidents. In the interim, and in the event no vice-president is available, and the Chairman of the Board of Councilors shall so certify, the President-Elect shall assume the office of President.

Sec. 4. The Vice-Presidents shall have equal rank. They shall assist the President in the performance of his duties, and shall perform such services as he may require of them in carrying out the policies of his administration. In the event of the death or removal of the President, one of the vice-presidents shall be selected by the Board of Councilors to fill out the unexpired term. The Vice-President thus selected shall, when officially notified by the Chairman of the Board of Councilors, assume the office of President.

Sec. 5.—The Secretary shall record the proceedings of the House of Delegates and the general meetings during annual and special sessions, and shall see that the various activities of the Association are made of record in his office. Under the direction of the Board of Trustees, he shall employ the necessary assistants in the performance of these and his other duties, and it shall be lawful for him to assume other duties and titles not in contravention of this Constitution and By-Laws, as directed by the House of Delegates or the Board of Trustees. He shall receive, receipt for and make of record in his office, all moneys and property coming into the possession of the Association. He shall promptly pass to the Treasurer all moneys thus received, taking his receipt therefor, and make such disposition of the property and other things of value thus received as may be directed by the Board of Trustees. He shall expend, etc. He shall, in conjunction with the President of the Association and under the advice of the Council on Scientific Work, prepare the program for the annual session, causing the same to be published in the Texas State Journal of Medicine approximately one month in advance of the convening of the annual session. He shall edit and prepare the minutes of the general meetings and the House of Delegates of annual and special sessions, and cause the same to be published in the first available numbers of the Texas State Journal of Medicine following adjournment of the said sessions. He shall, in conjunction with the President and the local arrangement committee, provide for the accommodation of annual and special sessions of the Association, and for the recognition and registration of members, delegates, visitors and guests attending such sessions. He shall maintain in his office records and data pertaining to the medical profession of Texas, with particular reference to membership in the State Asssociation, and the ethical and moral status of physicians, and the same shall be available to the proper officials of the State Association, of component county societies, and the American Medical Association. These records shall not be made public except by and with the consent of the individuals concerned or upon direct orders of the Board of Councilors of the State Association. The State Secretary shall use the facilities of his office so far as may be practicable and so far as may be required, in assisting the Board of Trustees, the Board of Councilors and the Council on Medical Defense, and the officers and committees of the Association, in the performance of their respective duties. He shall, under the direction of the President, or the proper officers or committees of the Association, conduct its official correspondence. He shall

notify officers of their election, committees of their appointment and members of such meetings as they may be expected to attend. He shall annually make report to the House of Delegates, covering in brief the transactions of his office, and shall make such reports to the Board of Trustees, the Board of Councilors and the Council on Medical Defense, as may be required of him by these bodies. He shall be bonded to the extent and in the manner required of him by the Board of Trustees, and in favor of the Board of Trustees, for the faithful performance of his duties as herein set forth and as may hereafter properly be required of him.

Section 6. The Treasurer shall be the custodian of all moneys, securities, deeds and properties, belonging to the Association, which may properly come into his possession, and shall hold the same subject to the direction and disposition of the Board of Trustees. He shall give to the Board of Trustees a suitable bond for the faithful performance of his trust.

Sec. 7. The duties of the trustees, councilors and members of the Council on Medical Defense, shall be as stated in Chapters III, IV and V, respectively, of these By-Laws.

Chapter III.—Board of Trustees.

Sec. 1. The Board of Trustees shall have charge of all properties and moneys of the Association. and shall manage its financial affairs after the manner and with the usual authority of boards of directors of corporations under the laws of the State of Texas. At the first meeting of the Board following adjournment of the annual session, it shall organize by electing a chairman and a secretary, and the chairman shall appoint such committees as may seem necessary or desirable. It shall be the duty of the Board of Trustees to provide for and superintend the publication of the Texas State Journal of Medicine, and all proceedings, transactions and memoirs of the Association. It shall have full discretionary power to omit from the Texas State Journal of Medicine, in part or in whole, or to publish in abstract any paper that may be referred to it by any of the scientific sections. It shall appoint a general manager and editor for the Journal, which two positions may be held by one person, and such assistants as may be necessary, and shall determine their salaries and the terms and conditions of their employment. All resolutions or recommendations of the House of Delegates pertaining to the expenditure of money must be approved by the Board of Trustees before the same shall become effective. During the annual sessions of the Association the Board shall hold meetings as often as may be deemed necessary by the chairman, and all matters referred to it by the House of Delegates shall be reported on within twenty-four hours, if so requested by the House. The Board of Trustees shall have the accounts of the Secretary, Treasurer and of the Journal office, audited annually or oftener, if deemed necessary, and shall make an annual report on the same to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, the amount and character of properties belonging to the Association, and a tentative budget covering the various activities and enterprises of the Association for the next fiscal year. Any vacancy in the office of Secretary or Treasurer, on account of death or for any other reason, shall be filled by the Board of Trustees until the next annual session of the House of Delegates. The Board of Trustees shall fix the salary of the Secretary and Treasurer. Regular meetings of the Board shall be held immediately following adjournment of the annual session. Special meetings of the Board may be called at any time by the Chairman, or by three members of the Board, by personal notice, or mailing a written or printed notice to the last known address of each trustee, at least five days before such meeting is to be held. The chairman shall convene the Board upon request of the President of the Association, and shall lay before the Board any communication from the President, as requested. Three members of the Board shall constitute a quorum.

Chapter IV.—Councilors.

Sec. 1. The House of Delegates shall elect a councilor for each councilor district. The term of office of councilors shall be three years, and their election shall be arranged in such manner that one-third, as nearly as possible, shall be elected each year. Vacancies in the office of councilors shall be filled by the President, for unexpired terms.

Sec. 2. A vice-councilor for each district may be appointed by the Board of Councilors. When so appointed, vice-councilors shall assist councilors in the performance of their duties and shall have the authority of councilors only when acting in their official capacity and in the place of the councilor.

Sec. 3. It shall be the duty of each councilor to organize county societies in his own district whenever opportunity may offer and the best interests of the profession may require; in a general way advise and supervise county societies in the conduct of the affairs of medicine in their respective jurisdictions; in a similar manner organize and in general supervise the district society of his district in accordance with the provisions of this Constitution and By-Laws; receive and, if possible, decide matters appealed to the councilor from the decision of component county societies; promptly pass to the Board of Councilors appeals that cannot be decided by him; adjust, if possible, complaints made by members of component county societies or by physicians in the district who are not members and who feel that they have grievances against a component county society; co-operate with the officers, councils and committees of the Association in the performance of their respective duties when called upon, and particularly insofar as they may pertain to his district. The councilor shall be the organizer, peace-maker and censor for his district. He shall visit each county society at least once each year, and the Board of Trustees shall include in the budget for the year a reasonable amount for defraying the expenses of such visits. It shall be lawful for the money thus set aside to be used in defraying the expenses of vice-councilors when in the performance of their duties. The State Secretary shall dispense the money appropriated for the use of the Board of Councilors, upon the orders of the Chairman of the Board.

Sec. 4. The Board of Councilors shall consist of the councilors for the several councilor districts. It shall elect its own administrative officers, including a chairman, a vice-chairman and a secretary, and shall provide its own rules of procedure; provided the said rules of procedure do not conflict with this Constitution and By-Laws, the Constitution and By-Laws of the American Medical Association, or the Principles of Ethics of the American Medical Association.

Sec. 5. The Board of Councilors shall authorize the issue of charters to county and district societies and, through its chairman, shall direct the Secretary of the State Association to issue such charters, as provided for in Section 1, Chapter XI, of these By-Laws.

Sec. 6. The Board of Councilors shall have the authority to revoke the charter of a county society for (1) failure or refusal to comply with the provisions of this Constitution and By-Laws; (2) failure to pay the per capita assessment of at least five members; (3) failure or refusal to exact of its members conformity with the Principles of Ethics of the American Medical Association; (4) failure to enforce the rule against fee splitting, as set out in Section 15, Chapter XI, of these By-Laws, and (5) it shall further have authority to revoke the charter of any component county society or any district society which, in the estimation of the Board, is antagonistic to and in conflict with the letter and spirit of this Constitution and By-Laws.

Sec. 7. The Board of Councilors shall constitute the Board of Censors of the Association. It shall hear complaints and consider questions involving the rights and standing of members of component county societies, whether in relation to each other, to component county societies or this Association. It shall receive appeals of individual members from the decisions of component county societies, through the councilors, or appeals of component county societies from decisions of individual councilors. It shall require that all such appeals be made in writing, reciting definitely and in detail, and in chronological order, the circumstances existing between the time of beginning of proceedings to the time of appeal, and setting out the reasons why the decision or decisions complained of should be set aside. Such complaints, having been made in due form, will be considered by the Board of Councilors as nearly as possible after the procedures of courts of appeal under the civil and criminal laws of the State of Texas, but the Council shall have authority to summon and hear witnesses, insofar as such authority may be extended by the State Association. Both sides to any controversy coming before the Board of Councilors under the provisions of this section, shall be entitled to legal counsel, so long as said counsel shall respect and obey the rules of procedure established by the Board. The decision of the Board of Councilors in all such cases shall be final, except that a member or a component county society or a district society may appeal to the Judicial Council of the American Medical Association in accordance with the by-laws of that organization. The Board of Councilors shall hold such meetings as it may deem necessary, provided that at least one meeting is held during the annual session of the Association, before which meeting any physician who has a grievance proper to be heard by the Board, shall be allowed to appear.

Sec. 8. All questions of ethics, complaints of members against each other or component county societies or district societies, coming before the House of Delegates, shall be referred to the Board of Councilors without debate. The Board of Councilors will make report to the House of Delegates on all such matters so referred, as promptly as circumstances will permit.

Sec. 9. The Board of Councilors shall cause to be prepared and, through its chairman or secretary, presented to the House of Delegates each year, a comprehensive report of the condition of the profession throughout the State, and the state of organization of component county societies, district societies and the State Association.

Chapter V.—Medical Defense.

Sec. 1. The Council on Medical Defense shall have the exclusive right to dispense the special fund set aside by the by-laws for medical defense (Chapter XIV). It shall devote these funds (1) to the defense of the members in good standing of the State Medical Association when threatened by medical malpractice suits; (2) to the procurement of legal services and advice for the State Medical Association, and (3) to the enforcement of the Medical Practice Act of this State, all in accordance with the provisions of this Constitution and By-Laws. This fund may be diverted to other purposes than this upon the unanimous agreement of the Council on Medical Defense and the Board of Trustees.

Sec. 2. It shall be the duty of the members of the Council on Medical Defense, severally or collectively, to investigate and defend all damage suits threatened or filed against the State Association, or any of its authorized agents; to investigate all claims of malpractice made against members; to take full charge of cases which, after investigation, they shall decide to be proper cases for defense and to defend such cases to the end and pay all costs of such defense; but they shall not pay, or obligate the Council on Medical Defense or the State Association to pay, any judgment rendered against any member upon the final determination of any such case. They shall be empowered to contract with such agents or attorneys as they may deem necessary, in the investigation of any case or the defense of any member, but they shall always consult the defendants in such cases before employing attorneys. In the instance a member seeking the services of the Council on Medical Defense carries an indemnity policy, it shall rest with the Council on Medical Defense whether the company in which the said member is insured shall be required to exercise exclusive control in the defense of the case or whether the Council shall join in the control thereof. In the instance it shall be decided that the said insurance company shall exercise exclusive control, the Council shall not assume any part of the financial burden of the case, but in any instance, the council shall extend all possible moral and advisory support. The Council on Medical Defense shall have the authority to assume such portion of the costs of any such case proper to be defended by the Association under this chapter of the by-laws, as it may see fit, in proportion to the control it is permitted to exercise in the conduct of the case.

Sec. 3. The defense of members threatened with medical malpractice suits, as contemplated in these by-laws, shall be extended only to members of the Association who are in good standing at the time application for defense is made, and who were in good standing in the Association at the time the alleged injury or damage causing the litigation occurred. Any member seeking defense under the terms of this chapter of the by-laws, who was in bad standing because of dereliction of duty on the part of the Association or its agents, and through no fault of his own, may be defended within the discretion of the Council on Medical Defense.

Sec. 4. Any member of the Association threatened with suit for malpractice, who desires the assistance of the Council on Medical Defense, shall immediately that he becomes aware of the threat to sue, so notify the secretary of the Council on Medical Defense, or any member thereof, or the general attorney of the Association, in the instance there is not sufficient time to communicate with a member of the Council. The secretary of the Council on Medical Defense, or any member or the general attorney, so notified, shall proceed immediately to investigate the circumstances reported, in the manner and after the procedure to be set out by the Council on Medical Defense, securing for the consideration of the said Council full data and statement of facts and circumstances surrounding the filing of the suit or suits for its consideration, and for the permanent files. The member sued or threatened with suit, and under

investigation by the Council on Medical Defense, shall be consulted and have the full confidence of the Council in all transactions connected with any such investigations. The Council on Medical Defense shall have the authority to require of a county society, or the president thereof, the appointment of a committee of investigation in any such case, and it may direct the said committee so appointed to report to the Council on Medical Defense and not to the society from which it is appointed.

CHAPTER VI—SESSIONS AND MEETINGS.

Section 1. The Association shall hold an annual session at such time and place as may be established by the House of Delegates or the Board of Trustees, in accordance with the provisions of this Constitution and By-Laws. Special sessions may be held at any time or place, upon call of the president, at his discretion or upon petition of thirty Delegates, as provided for in Section 3, Article VII, of the Constitution of the Association.

Sec. 2. The annual sessions of the Association shall consist of general meetings, meetings of the House of Delegates and meetings of the Scientific Sections. There shall be one general meeting each day; the House of Delegates may meet at its discretion, and the Scientific Sections shall meet in accordance with the published program and this Constitution and By-Laws. Special sessions shall be held in accordance with the provisions of the call responsible for their convening.

Sec. 3. The order of exercises and meetings as set forth in the official program, and published, shall be followed from day to day until completed, unless otherwise directed by vote of a general meeting.

Sec. 4. General meetings of the Association shall be held in accordance with Article VII of the Constitution. One hundred members shall constitute a quorum. All registered members and guests shall have equal rights to participate in the proceedings and discussions, and, except guests, to vote on pending questions. The president shall deliver his Annual Address at a general meeting.

Sec. 5. The general meeting shall have authority to order referendum vote in accordance with Article VIII of the Constitution, and receive and act upon all referred questions; and it may recommend to the House of Delegates the creation of commissions and committees for scientific investigation and research for other purposes.

Sec. 6. During the time of a general meeting, all social and other scientific activities of the Association shall cease, regardless of provisions of the program or contingencies of any sort.

Sec. 7. The House of Delegates shall meet at such time and place as may be decided upon by its own act; but such meetings shall be so conducted as to interfere as little as possible with the meetings of the Scientific Sections. It shall be lawful for the House of Delegates to hold its first meeting of the Annual Session on the day preceding the convening of the said Annual Session.

Sec. 8. The Scientific Sections shall meet in accordance with the official program, and under no conditions will their meetings be so extended as to interfere with a General Meeting.

CHAPTER VII—HOUSE OF DELEGATES.

Section 1. Unless otherwise directed by resolution adopted during a preceding meeting, the House of Delegates shall hold its first meeting on the first day of the Annual Session, beginning at 1:30 p. m. It shall be lawful for the House of Delegates to meet in regular session on the day preceding the convening of the Annual Session, or in called session, as provided in these By-Laws. It shall meet from time to time throughout the Annual Session as may be necessary, avoiding as far as possible conflict with the meetings of the Scientific Sections, and with other activities of the Association. It shall recess or adjourn for the convening of a General Meeting, or it may continue its sessions in conjunction with a General Meeting. It may remain in session following final adjournment of the Annual Session, for the purpose of completing the business before it. The order of business of the House of Delegates shall be arranged in advance of its meetings, and, if possible, published to the members prior to its convening. It shall organize and function in accordance with Article IX of the Constitution of the Association.

Sec. 2. Component county societies which have made their annual reports to the State Secretary, in accordance with this Constitution and By-Laws, which have on their rolls at least five members, and which have paid their annual assessments to the State Secretary, shall be entitled to representation in the House of Delegates to the extent of one delegate for the first one hundred members or less, and one additional delegate for each additional one hundred members or fraction thereof. Such delegates shall be elected by their respective component county societies, in accordance with Section 2, Chapter XI of these By-Laws.

Sec. 3. A majority of the delegates and ex-officio members of the House of Delegates registered at the Annual Session, shall constitute a quorum. The presence of a quorum shall be determined by the secretary following a call of the roll, as submitted by the Reference Committee on Credentials, and shall be established by announcement of the president.

Sec. 4. Delegates and ex-officio members of the House of Delegates shall be seated by the Reference Committee upon presentation of satisfactory evidence of their right to membership in the House of Delegates, in accordance with this Constitution and By-Laws. Delegates shall present credentials signed by the president and secretary of their respective societies, to the effect that they have been duly elected as such. Alternate delegates shall present the credentials of their principals, duly signed over to them by the said principals. Ex-officio members shall qualify by establishing their identity as officials of the Association who are entitled to membership in the House of Delegates.

Sec. 5. The House of Delegates shall have full authority to decide the right of any claimant to membership therein, provided no provisions of the Constitution and By-Laws are violated in the decision. Any member of the Association claiming a seat in the House of Delegates may appeal to the House from the adverse decision of the Reference Committee on Credentials.

Sec. 6. A delegate once seated by the House of Delegates shall be relieved only by vote of the House of Delegates and in the instance it is necessary for him to leave the city in which the meeting is being held. When so relieved, his alternate, or another alternate elected by his society, may be seated in his stead, by complying with the requirements of these By-Laws pertaining to the seating of delegates.

Sec. 7. The House of Delegates shall have authority to appoint committees and commissions not mentioned in this Constitution and By-Laws, and such officials as may be necessary for the conduct of its own affairs and not prohibited by this Constitution and By-Laws. It shall have the authority to establish rules of conduct, but in general and in all

instances not covered by this Constitution and By-Laws, or its own special rules, Robert's Rules of Order shall govern.

Sec. 8. All officers, councils and committees permitted to report to the House of Delegates, shall be heard as set out in the order of business for the House, and all such reports shall be referred to appropriate reference committees of the House without debate, except as provided by Section 9 of this Chapter of the By-Laws. All questions pertaining to medical ethics shall be referred to the Board of Councilors without debate. Such questions so referred shall be debated and decided by the House of Delegates only upon recommendation of the Board of Councilors, and in executive session. All matters pertaining to appropriation of funds shall be referred to the Board of Trustees, with or without recommendation, directly following submission to a Reference Committee.

Sec. 9. Unanimous consent shall be required for the introduction of new business at the last meeting of the House of Delegates during the Annual Session, except when presented by the Board of Trustees, the Board of Councilors, the Executive Council, or at the instance of any of the Scientific Sections. All new business so presented shall require three-fourths affirmative vote for adoption.

Sec. 10. The House of Delegates shall, as promptly as possible, decide questions referred to it by a General Meeting, and may refer questions to a General Meeting for decision, in accordance with Article VIII of the Constitution of the Association.

Sec 11. All meetings of the House of Delegates shall be open to members of the Association, but the House of Delegates shall have authority to exclude all except members of the Association at any time. It shall require of all present, whether members of the House or not, the same decorum it requires of its own members. Executive sessions, when ordered, shall serve to exclude only those who are not members or guests of the Association, and all who remain in attendance on such meetings shall be required to abide by the established rules of the House pertaining to such sessions, or special rules adopted at the time of such sessions.

Chapter VIII—Elections.

Section 1. The House of Delegates shall elect the officers of the Association, and delegates to the American Medical Association, and select the place for and fix the time of the following Annual Session, on the morning of the last day of the Annual Session. Nominations shall be from the floor of the House, and by members of the House. Nominating speeches shall not exceed five minutes in duration, and seconding speeches shall not exceed two minutes. No person known to have solicited votes for or to have sought any office within the gift of the Association, shall be eligible to nomination therefor.

Sec. 2. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect. When there are three or more nominees, the one receiving the least number of votes on each ballot shall be dropped, until a majority vote is received by one of the said nominees. When there is only one nomination, vote may be by acclamation.

Sec. 3. Delegates and alternate delegates to the American Medical Association shall be elected in accordance with the By-Laws of that organization.

Chapter IX—Committees.

Section 1. In addition to the officers named in Article III of the Constitution, the activities of the Association shall be carried on by such committees as may be established by the House of Delegates or the president, in accordance with this Constitution and By-Laws. Committees shall be classified as follows: (a) Standing Committees; (b) Special Committees; (c) Reference Committees, and (d) Special Delegates.

Sec. 2. All committees shall be appointed by the president, unless otherwise provided for in these By-Laws.

Sec 3. (a) Standing Committees of the Association shall be as follows: (1) Executive Council; (2) Council on Scientific Work; (3) Committee on Legislation; (4) Committee on Collection and Preservation of Records; (5) Committee on Transportation; (6) Committee on Arrangements for the Annual Session; (7) Committee on Memorial Exercises, and (8) Committee on Publicity.

Sec. 4. (a-1.) The Executive Council shall consist, ex-officio, of the President and Secretary of the Association, the President-Elect, the Vice-Presidents, the Board of Trustees, the Board of Councilors and the Legislative Committee, of which Council the President and Secretary of the Association shall be chairman and secretary, respectively. It shall be the duty of this Council to advise and counsel with the President in the management and cöordination of the several activities of the Association, upon his call. It shall be the duty of the President to assemble this Council for conference upon request of the Chairman of the Board of Trustees, the Chairman of the Board of Councilors, or the Chairman of the Legislative Committee. It shall be the special duty of this Council to represent the Association in its relation to the public, through the established agencies of the Association, or agencies to be created by the Council or the House of Delegates for that purpose. It shall formulate and conduct such publicity and educational campaigns as may be ordered by the House of Delegates, and upon plans formulated by the House of Delegates or upon its own initiative if not thus directed. The Board of Trustees shall include in its annual budget a reasonable sum for defraying the expenses of such publicity campaign and such legislation work as may be directed by the House of Delegates. Funds thus set aside shall remain in the treasury of the Association and shall be expended by the Secretary upon orders of the Chairman of the Council.

Sec. 5. (a-2.) The Council on Scientific Work shall consist of five members. The members of the first Council shall be appointed for one, two, three, four and five years, and thereafter the President-Elect shall appoint to fill vacancies created by expiration of term of office. These appointments shall be confirmed by the House of Delegates, and shall be considered at the time of election of officers. The President and Secretary of the State Association and officers of Scientific Sections, shall be ex-officio members of this Council. It shall be the duty of this Council to consider and report to the House of Delegates on all matters of scientific interest to the profession, on its own initiative or upon orders of the President or the House of Delegates. It shall through conferences endeavor to cöordinate the scientific work of the Association, including the work of the Scientific Sections and of the several standing and special committees on scientific subjects. It shall advise with the President and Secretary in the arrangement of the scientific program for the Annual Sessions. It shall have authority to consult or act in conjunction with other organizations in the accomplishment of its purposes, as declared in these By-Laws.

Sec. 6. (a-3.) The Committee on Legislation shall consist of five members. The members of the first committee shall be appointed for one, two, three,

four and five years, and thereafter the President-Elect shall appoint to fill vacancies created by expiration of term of office. These appointments shall be confirmed by the House of Delegates and shall be considered at the time of election of officers. The President and Secretary of the State Association shall be ex-officio members of this committee, and its chairman and secretary, respectively. It shall be the duty of this committee to represent the Association in carrying out its legislative policy as established by the House of Delegates or the Council on Public Relation. In the absence of instructions from either the House of Delegates or the said Council on Public Relations, the committee shall have the authority to exercise its own judgment in such legislative matters as may properly come before it. The committee shall serve as a component part of the Executive Council, in accordance with Section 4, Chapter IX, of these By-Laws.

Sec. 7. (a-4.) The Committee on Collection and Preservation of Records shall consist of five members, all past presidents, appointed by the President of the Association upon the nomination of the Association of past presidents, provided that the President shall have the authority to appoint on his own initiative should the said Association of Past Presidents fail to nominate in time for that purpose. The members of the first committee shall be appointed for one, two, three, four and five years, and thereafter the retiring President shall appoint to fill vacancies created by expiration of term of office. These appointments shall be confirmed by the House of Delegates, and shall be considered at the time of election of officers. The President and Secretary of the State Association shall be ex-officio members of this committee. It shall be the duty of this committee to collect and preserve to the best advantage, all records and data pertaining to the Association and its activities which may be of interest to posterity, and which may eventually contribute to the compilation of a comprehensive medical history of Texas. The records and data collected by the committee shall be deposited with the Secretary of this Association.

Sec. 8. (a-5.) The Committee on Transportation shall consist of five members, including, ex-officio, the President and Secretary of the Association. This committee shall have charge of all matters pertaining to railroad rates and transportation to our Annual Sessions and the meetings of other organizations in which the medical profession of Texas may be largely interested. It shall cöoperate with other committees, as it may see fit, in carrying out its purposes.

Sec. 9. (a-6.) The Committee on Arrangements for the Annual Session shall consist of five members. It shall be appointed by the President on nomination of the component county society of the county in which the Annual Session is to be held; provided, that the President shall have the authority to appoint on his own initiative should the nomination here provided for be delayed beyond a reasonable time following the Annual Session preceding. Any vacancy on the committee shall be filled by the President on nomination of the entertaining society. It shall be the duty of this committee to provide, through sub-committees of its own selection, suitable accommodations for the Annual Session, the requirements thereof being ascertained by consultation with the President and Secretary of the Association. This committee shall see that no social function is allowed to interfere with the meetings of the Scientific Sections or a General Meeting, as set forth in the official program, and no alteration or rearrangement of the official program as published shall be made in any particular, except on permission of a General Meeting, or for the purpose of correcting errors therein. No product or enterprise shall be exhibited in connection with any Annual Session which is not acceptable to the advertising pages of the TEXAS STATE JOURNAL OF MEDICINE, as determined by the management of said publication.

Sec. 10. (a-7.) The Committee on Memorial Exercises shall consist of five members. It shall be the duty of this committee to prepare and conduct appropriate services in memory of our dead, at such time during the Annual Session as may be set aside for that purpose.

Sec. 11. (a-8.) The Committee on Publicity shall consist of five members. It shall be the duty of this committee to assist the Arrangements Committee and cöoperate with any local committee appointed for publicity purposes, in securing the publication in the lay press and elsewhere, of attractive information relating to the Annual Sessions, prior to, following and during, the Annual Sessions. It shall endeavor to procure from contributors to the scientific program, abstracts of their respective papers, suitable for publication in the lay press and elsewhere; when so procured, the said abstracts shall be properly edited and given to the representatives of such news agencies as may be interested.

Sec. 12. (b) Special Committees for special purposes, may be appointed by the President upon his own initiative, or upon the orders of the House of Delegates or a General Meeting of the Association. When so appointed, the purposes for which they are appointed, the number of members, terms of office and life of the committees, shall be clearly and definitely stated, and it shall be the duty of the President and the Secretary of the Association to see that such committees are continued as long as may be required, and discontinued when their purposes have been accomplished. Special committees appointed to consider subjects and policies dealt with by a standing committee, shall work in close cöoperation with such standing committees, and if deemed advisable by the President, shall report to the said standing committees.

Sec. 13. (c) As soon as practicable after the organization of the House of Delegates, the President shall appoint the following Reference Committees, to consist of five members each. These committees shall consider and report upon all matters referred to them by the House of Delegates, and shall report finally on all such matters on or before the final meeting of the session for which they were appointed: (1) Reference Committee on Credentials; (2) Reference Committee on Reports of Officers and Committees; (3) Reference Committee on Resolutions and Memorials; (4) Reference Committee on Finance; (5) Reference Committee on Amendments to the Constitution and By-Laws, and (6) Reference Committee on Scientific Work.

Sec. 14. (d) The President shall appoint such Special Delegates and Representatives as he may deem desirable or as may be ordered by the House of Delegates.

Sec. 15. Officers, standing committees, special committees and special delegates, shall be required to file duplicates of their respective reports with the State Secretary ten (10) days prior to the Annual Session, provided that the data and information required for the compilation of said reports are available by that time, and the State Secretary shall have the said reports published in pamphlet form, for the convenience of the House of Delegates.

CHAPTER X—SCIENTIFIC SECTIONS.

Section 1. The Scientific Program for the Annual Sessions shall be divided into the following sections:

(1) Section on Medicine and Diseases of Children.
(2) Section on Surgery.
(3) Section on Gynecology and Obstetrics.
(4) Section on Ophthalmology, Otology, Rhinology and Laryngology.
(5) Section on Radiology and Physiotherapy.
(6) Section on Public Health.

Sec. 2. The President shall appoint a chairman and secretary for each section. It shall be the duty of said chairman and secretary to, in consultation with the Committee on Scientific Work, prepare programs for their respective sections for the next annual session following their appointment. Their term of office shall conclude with the adjournment of the annual Session for which their respective programs are compiled.

Sec. 3. The number of papers to be presented on section programs shall be limited as follows: Section on Medicine and Diseases of Children, 25; Section on Surgery, 25; Section on Gynecology and Obstetrics, 18; Section on Ophthalmology, Otology, Rhinology and Laryngology, 20; Section on Radiology and Physiotherapy, 18; Section on Public Health, 20.

Sec. 4. Section officers shall select the papers to be presented to their respective sections from among the best papers offered, and in accordance with the general plans for the work of the scientific sections formulated by the Council on Scientific Work. Final decision as to the papers to be thus selected shall be deferred by section officers until approximately sixty days before the date of the Annual Session, and any member of the State Association who is in good standing shall have the right, and it shall be his privilege, to offer a paper to any scientific section, but no member or guest shall be allowed to contribute more than one paper to the programs of the scientific sections at the same session, and no paper that has been published shall be accepted for the scientific program of any session of the Association.

Sec. 5. Papers presented by members of the Association must have first been read in full before a component county society, or, where a component county society is not available for this purpose, the district society of which the author is a member. The secretary of such society shall certify to the section secretary that such paper has been so read. It shall be the duty of the officers of sections to ascertain from members who are on their respective programs whether this requirement has been met, and they shall refuse to permit the reading of such papers before their respective sections unless this by-law has been complied with. Papers offered to the scientific sections shall be considered the pledged property of the State Association, and shall in fact become the property of the said State Association when presented, and prospective authors shall be so informed by section officers in advance of the acceptance of their contributions. Papers shall be delivered to the secretary of the section as soon as they have been read before the section; and in the instance the author is not able to present his paper, he shall see that it comes into the possession of the section secretary in time for presentation if it is the desire of the section chairman to have it so presented. All such papers shall be prepared in typewritten form, shall be "originals," written on one side of the paper only, double-spaced and with ample margins, and not bound.

Sec. 6. Scientific Sections shall convene at the time and place prescribed by the scientific program for the Annual Session, and their sessions shall be so conducted as to insure the completion of the program in the time specified. Under no circumstances will such sessions be permitted to interfere with or extend into the time set aside on the program for a General Meeting. The sessions of scientific sections shall be governed by rules of order prepared by the Council on Scientific Work, and where such rules do not cover, by Robert's Rules of Order, so far as Robert's Rules of Order may apply. No essayist shall be permitted more than twenty minutes in which to present his paper; provided, that the Council on Scientific Work may make exception to this rule in advance, which exception, when made, shall be noted on the program. Not more than five minutes shall be allowed each speaker in discussing any one paper. The time allowed speakers shall not be extended in any instance, but it shall be within the province of a section to continue the presentation or discussion of any paper following the time of adjournment of the section, provided the said extension of time does not conflict with a General Meeting.

Sec. 7. Petitions, memorials and resolutions originating in scientific sections must be approved by the House of Delegates before becoming operative.

Chapter XI—County Societies.

Section 1. Five or more physicians of any county or group of counties in this State, who possess the qualifications for membership in the State Association as set out in Section 2, Article II of the Constitution thereof, may, by applying to the Board of Councilors, secure a charter as a component county society of the State Medical Association of Texas, as provided in Section 5, Chapter IV, of these By-Laws, provided that no other component county medical society of the State Association embraces within its established jurisdiction any part of the territory sought thus to be incorporated. All such charters shall be signed by the President and Secretary of the State Association, and shall bear the seal of the State Association.

Sec. 2. Each component county society shall prepare and enact into law, a constitution and by-laws, or rules and regulations, in keeping with the Constitution and By-Laws of the State Medical Association, no part of which may be in contravention therewith. Before becoming operative, such constitution and by-laws, or rules and regulations, shall be approved by the Board of Councilors, and they shall be promptly submitted for that purpose, through the Councilor of the district in which the component county society is located. Should the Board of Councilors refuse to approve any constitution and by-laws, or rules and regulations thus submitted, the same shall be returned for reconsideration and amendment. The Board of Councilors may revoke the charter of any component county society which fails or refuses to amend its constitution and by-laws, or rules and regulations, so as to make them compatible with the Constitution and By-Laws of the State Medical Association. Only one component county society may be chartered in any one county.

Sec. 3. Component county societies shall have the right and authority to secure incorporation under the laws of the State of Texas, and when so incorporated they shall be entitled to conduct their affairs in accordance with the requirements of the corporate laws of the State of Texas and the Constitution and By-Laws of the State Medical Association of Texas, the former having precedence only where there is an irreconcilable conflict. It shall be lawful for a county society thus incorporated to provide for the transaction of its business through its Board of Directors, provided that an appeal from the decisions of said Board of Directors to the county society is allowed, and that the decision of the county society on such matters so appealed is final, subject only to

appeal to the Councilor of the district and the Board of Councilors of the State Association as provided in this Constitution and By-Laws; and provided further, that trials of members for unethical and improper conduct, the election of members and the election of officers, shall be by the society as a whole. The application for incorporation under the laws of the State of Texas shall be made on the following form, or some immaterial modification thereof; provided, that component county societies at the time of the adoption of these by-laws holding charters under the State of Texas which do not require action incompatible with this Constitution and By-Laws, shall not be disturbed:

THE STATE OF TEXAS,
COUNTY OF.....

Know All Men by These Presents:

That the persons hereinafter named have agreed to form themselves into a corporation under the provisions of Title 25 of the Revised Statutes of the State of Texas and amendments thereto, and have adopted the following as their charter, to-wit:

ARTICLE I.

This corporation shall be known as the..... County Medical Society, by which name it shall contract and be contracted with, sue and be sued, and conduct all of its business.

ARTICLE II.

The purposes of this corporation shall be to associate in a single body the duly licensed and regular practitioners of medicine in.....County, Texas, for the purpose of promoting medical knowledge, elevating the standard of medical education, encouraging free intercourse among its members, and inculcating principles of professional ethics, protecting its members against impositions, establishing a library for the use of its members, dispensing charity among the worthy sick, and assisting in upbuilding and enforcing the laws enacted to protect the public against any who may offer to practice medicine in violation of the laws of the State of Texas.

ARTICLE III.

Said corporation shall have the right to own and hold such real estate as may be necessary for the purpose of carrying on and transacting its business, but none other.

ARTICLE IV.

The home office and place of business shall be in the City of....., ...County, Texas.

ARTICLE V.

It shall have an existence for a period of fifty years.

ARTICLE VI.

The business of the corporation shall be transacted by a Board of Directors of not less than five nor more than eleven, all of whom shall be duly qualified members. The following persons shall constitute the Board of Directors for the first year, and until their successors are elected, to-wit:

....., whose post office is.....
....., whose post office is.....
....., whose post office is.....
....., whose post office is.....
....., whose post office is.....

ARTICLE VII.

This corporation shall have no capital stock, and its business shall not be conducted for profit.

Witness our hands, this.....day of.....192....

.....
.....
.....
.....
.....

THE STATE OF TEXAS,
COUNTY OF.....

Before me, the undersigned authority, on this day personally appeared....., ..., ..., and....., known to me to be the persons whose names are subscribed to the foregoing instrument, and each acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this..... day of.....192....

.....
A Notary Public in and for
.....County, Texas.

Sec. 4. Each component county society shall judge of the qualifications of its own members, but it shall have all due regard for the fact that only through a component county society may a physician become a member of the State Medical Association and of the American Medical Association, and shall consider that every white, legally registered physician within its jurisdiction and all white medical officers of the Army or Navy or of the Federal Government, or teacher in "Class A" medical schools of this State who do not practice medicine and who are not required to register under the Medical Practice Act of Texas, who are at the time *bona fide* residents of the State, who do not hold themselves out as a practitioners of sectarian medicine who shall subscribe to the principles of ethics of the American Medical Association, are entitled to membership.

Sec. 5. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, shall have the right of appeal to the Board of Councilors, which, on a majority vote, may permit him to become a member of another component county society.

Sec. 6. Any physician residing in a county other than that embraced in the charter of a component county society, may become a member of the said component county society upon the same terms as any other member, and any physician residing within the jurisdiction of another component county society may become a member of an adjoining component county society, upon the permission of the society thus holding jurisdiction.

Sec. 7. A member of a component county society removing to a county over which another component county society holds jurisdiction, shall forfeit his membership after a period of twelve months from the date of his location in his new place of residence, unless he has in the meanwhile transferred his membership to the said component county society, holding jurisdiction, as provided in these By-Laws; unless and except he has secured the permission of said component county society holding jurisdiction to remain a member of his previous society, or join another and more convenient society, as provided for in Section 6, Chapter IX, of these By-Laws.

Sec. 8. Any member of a component county medical society whose dues are paid and against whom no charges of unethical or immoral conduct are pending, and who has removed from the juris-

diction of his county society, shall, upon his written request, be granted the right to transfer to another component county society within this State, or to a county society in another state. When such a transfer is presented to a component county society within this State, it shall be honored and the applicant shall at once become a member thereof, and without additional expense to him, provided that in the meantime charges of unethical or immoral conduct have not been presented to either the old or the new county society, which may be dealt with better in the old county society than in the new, under which circumstances the transfer papers shall be returned to the society granting them, with full information as to the charges and accusations made; and it shall be the duty of the county society in which the membership thus remains, to deal with the accused in accordance with these By-Laws. In the instance a transfer from one component society to another is completed, the secretary of the society receiving the transferred member shall immediately notify the secretary of the society extending the permit to transfer, of all the facts in the case, and each secretary shall make due record thereof, and promptly notify the State Secretary of the transaction. Any member received by a county society on transfer from a component county society of another State, shall pay the amount of the per capita assessment made by the State Medical Association of Texas for the current year. In such instances, county and district society dues shall be waived.

Sec. 9. Application for membership in a component county society shall be made in duplicate, and shall contain the following information: Full name and address; place and date of birth; preliminary and medical education, including degrees received; date and number of certificate to practice medicine in Texas; previous locations and dates of residence in each, and such other information as may be required by the State Association or the component county society. Each application shall be endorsed by two or more members of the society to which it is presented, and it shall be approved or disapproved by the Board of Censors before being voted on by the society. No application shall be voted on at the same meeting at which it is presented, or until the Board of Censors has had an opportunity to conduct such investigations as may be required by these By-Laws, provided the said report shall be made within sixty days, or extension of time granted by the society.

Sec. 10. Component county societies shall consist of not less than five members, and there shall be a president, a secretary-treasurer and a board of three censors, and no member can hold more than one of such offices at one and the same time. There may be such other officers as may be required, including a board of directors if the society is incorporated under the laws of the State of Texas. The term of office for all officers, except the censors, shall be for the Association year. The term of office of the censors shall be three years, and they shall be so elected that but one vacancy normally occurs each year. All officers and the delegates to the State Association shall be elected during the month of December, or at the last meeting of the year in the instance there is no meeting in that month. Vacancies in the offices referred to in this By-Law shall be filled in the manner stated in the society by-laws; but when no provisions are thus made for any such contingency, such vacancies shall be filled by the component county society president, and until the time for the annual election of officers.

Sec. 11. Each component county society shall be entitled to representation in the House of Delegates on the following basis: One delegate for the first one hundred members or less, and one additional delegate for each additional one hundred members or fraction thereof. (Section 2, Chapter VIII, these By-Laws.) The term of office of delegates shall be two years, and their election shall be, as far as possible, so arranged that not more than half of the vacancies shall occur in any one year. There shall be an alternate delegate elected for each delegate, and it shall be lawful for any alternate delegate to serve in the place of any absent principal, upon the proper transfer of credentials. (Sections 4 and 6, Chapter VIII, these By-laws.) The county society secretary shall furnish each delegate with suitable credentials, certifying to his election, and any delegate has the authority to sign over his credentials to the alternate delegate chosen by the society for his place, or, in the absence of his own alternate delegate, to another alternate delegate who may be able to attend the Annual Session which the credentials cover.

Sec. 12. Secretaries of component county societies shall be the custodians of the books, papers and records of their respective societies, including the charters and incorporation papers, if any; they shall prepare and maintain records showing the names and addresses of both members and non-members, and such other matter as they may deem pertinent or which they may be required to make note of, either by their respective societies or the State Association; maintain contact as nearly as possible with the physicians of their respective counties; receive all dues and moneys coming to the society, and pay out or direct the paying out of same, or turn the same over to the treasurer, on orders of their respective presidents, and perform such other secretarial duties as their societies may require of them. They shall make annual reports to the State Secretary, as required in this Constitution and By-Laws, and shall make such other reports to the State Secretary as may be required from time to time in the prosecution of the affairs of the State Association and its subordinate bodies.

Sec. 13. The Boards of Censors of component county societies shall examine into and report on the qualifications of applicants for membership in their respective organizations, and shall ascertain from the State Secretary what the records in his office show in regard to the past conduct of any such applicants, before making report to their respective societies. They shall also receive and investigate charges of unethical conduct made against members of their respective societies; and in making reports thereon, they shall include a comprehensive summary of all testimony presented. In making such investigations, boards of censors may assume to summon witnesses and interrogate them on their honor, insofar as the State Association may grant such prerogatives.

Sec. 14. There shall be a committee on legislation and public relations in each component county society, the duties of which committee shall be to cöoperate with the Council on Public Relation of the State Medical Association, or with the Legislative Committee thereof, in public health and legislative matters, and to perform such other duties as may be required of them by their respective county societies.

Sec. 15. County societies shall require of their members strict adherence to the Principles of Medical Ethics of the American Medical Association; observance of the Constitution and By-Laws of the State Medical Association, and approved constitutions and by-laws of their county societies, and shall strictly forbid the act of fee splitting in any of its forms,

as defined by the Board of Councilors. They shall have the authority to exact compliance with all laws, rules and regulations covered by this Constitution and By-Laws, through such disciplinary action as reprimand, suspension or expulsion. When charges of unethical, criminal or gross unprofessional conduct, or violation of the principles of ethics or the laws of the State Association or the county society, are made against a member, the said charges shall be reduced to writing and referred without debate, together with all papers and exhibits, to the board of censors. The board of censors shall hear all testimony relating to the case and present a comprehensive summary of same to the society. The said summary of testimony shall be read to the society, which shall then proceed to vote upon the guilt of the accused. All voting shall be by written ballot, and no motion shall be necessary to initiate voting. If a majority vote guilty, the vote shall then be whether the accused shall be (1) censured, (2) suspended, or (3) expelled. If the first ballot is not conclusive the penalty receiving the smallest number of votes shall be dropped, and the balloting continued until the punishment shall have been fixed by the necessary majority as herein provided. Censure and suspension shall each require a majority of, and expulsion two-thirds of the members present and voting. If on any ballot a majority vote for suspension, the vote shall then be taken to fix the term of such suspension, dropping after each ballot the penalty receiving the smallest number of votes. If the penalty fixed be suspension for a specified term, this suspension shall date from the date of this action, unless an appeal be taken, in which event it shall date from the decision of the tribunal to which the appeal was taken. If in any case the balloting be between expulsion and any other one penalty, and expulsion receive a majority composed of less than two-thirds, this penalty shall be declared lost, and the next succeeding ballot cast to determine whether the other penalty under consideration shall be assessed. No action shall be taken by the society until at least six weeks have elapsed since the filing of the charges.

Sec. 16. The accused in any case coming before a component county society, as contemplated in Sections 13 and 15 of this Chapter of the By-Laws, shall be entitled to counsel of his own selection, and shall be allowed to secure through the use of a competent stenographer, a verbatim report of the evidence adduced in the investigation of his case by the Board of Censors (Section 13, Chapter XI, these By-Laws), and he shall be entitled to counsel when his case is considered by the county society (Section 15, Chapter XI, of these By-Laws); provided that the said counsel and the said stenographer shall comply in every respect with the rules and regulations of the Board of Censors and the component county society, and that the said Board of Censors and the said component county society shall be furnished a true copy of all testimony thus taken and with any record made by either the counsel or the stenographer, of any proceedings in connection with the case. It is provided further, that the rules and regulations of Boards of Censors and component county societies herein referred to, shall not be in contravention of the Constitution and By-Laws of the Association.

Sec. 17. Members suspended or expelled under the provisions of these By-Laws, shall be denied all privileges of the Association for the period of their suspension or non-membership, except their subscription to the TEXAS STATE JOURNAL OF MEDICINE, and it shall be the duty of the secretary of the society to promptly notify the State Secretary, who shall make record in his office of any restrictions thus placed by the society against any of its members, and to call the attention of same to proper officers, committees and councils of the State Association and of the American Medical Association, the good of organized medicine being considered; but he shall not, except when specifically so directed by the Board of Councilors of the State Medical Association, make public any such findings.

Sec. 18. County societies shall have the authority to make per capita assessments against their members sufficient to cover the per capita assessments of the State Association and district societies, and defray the expenses of their own organizations; but no official action shall be taken by component county medical societies establishing a fixed schedule of fees for the medical, surgical and special services of its members, provided that this By-Law shall not be so construed as to prevent the discussion of such matters as service and charges therefor, or unofficial agreement between physicians as such rather than as members of component county societies, as to what charges would be proper for such services.

Sec. 19. The Principles of Medical Ethics of the American Medical Association shall govern the members of component county societies in their relationship to each other, to their societies and to the public. In the absence of provisions to the contrary, Roberts' Rules of Order shall govern their meetings and proceedings in general.

Sec. 20. The official year for county societies shall be January 1 to December 31, both dates inclusive, and dues shall be paid accordingly. Members for the preceding year not reported to the State Secretary as having paid their assessments for the current year, shall be considered as having forfeited their membership on the first day of January. Such members may be reinstated by county society secretaries upon the payment of dues for the current year, if paid within the year, but such reinstatement may not be construed as extending the privilege of medical defense for the period between the first of January and the date upon which they actually paid; but subscription to the TEXAS STATE JOURNAL OF MEDICINE may be extended to cover this period.

CHAPTER XII—DISTRICT SOCIETIES.

Section 1. The Board of Councilors shall organize the profession of each councilor district into a district society as soon as practicable, and shall cause charters to be issued to said district societies in the manner and after the form prescribed for county societies (Section 5, Chapter IV, and Sections 1 and 2, Chapter XI, these By-Laws). It shall be lawful to combine two or more districts into one society, but not to divide districts for this purpose.

Sec. 2. District societies so organized and chartered, shall have for their sole purpose the improvement of the scientific attainments and living conditions of the members of their respective societies, and they shall under no circumstances assume the prerogatives or functions of component county societies, beyond hearing papers read and certifying to that fact, in the absence of opportunity of an author to present the same to a county society, in qualifying for position on the program of a scientific section of the State Association. Officers of district societies shall be as desired by the said societies, and their duties shall be as they may define, provided they do not in any manner contravene the provisions of this Constitution and By-Laws.

CHAPTER XIII—COUNCILOR DISTRICTS.

Section 1. The House of Delegates, acting upon the advice of the Board of Councilors, shall divide the State into appropriate councilor districts, as

provided for in Article VIII of the Constitution of the State Association.

Sec. 2. There shall be fifteen councilor districts in the State, the counties being thus grouped:

District No. 1: Brewster, Culberson, El Paso, Jeff Davis, Loving, Pecos, Presidio, Reeves, Terrell, Ward and Winkler.

District No. 2: Andrews, Borden, Cochran, Crane, Dawson, Dickens, Ector, Fisher, Gaines, Garza, Glasscock, Howard, Hockley, Jones, Kent, King, Lynn, Martin, Midland, Mitchell, Nolan, Scurry, Stonewall, Taylor, Terry, Upton and Yoakum.

District No. 3: Armstrong, Bailey, Briscoe, Castro, Carson, Cottle, Childress, Collingsworth, Crosby, Deaf Smith, Dallam, Donley, Floyd, Gray, Hale, Hall, Hardeman, Hemphill, Hutchinson, Hansford, Hartley, Lamb, Lipscomb, Lubbock, Motley, Moore, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher and Wheeler.

District No. 4: Brown, Coke, Concho, Crockett, Coleman, Irion, Kimble, Lampasas, Menard, Mills, McCulloch, Runnels, Schleicher, Sterling, Sutton and Tom Green.

District No. 5: Atascosa, Bandera, Bexar, Comal, Dimmitt, Edwards, Frio, Guadalupe, Gillespie, Gonzales, Karnes, Kendall, Kerr, Kinney, LaSalle, Maverick, Medina, Uvalde, Val Verde, Wilson and Zavalla.

District No. 6: Aransas, Bee, Brooks, Cameron, Dunn, Duval, Encinal, Hidalgo, Jim Wells, Kleberg, Live Oak, McMullen, Nueces, Refugio, San Patricio, Starr, Webb, Willacy and Zapata.

District No. 7: Bastrop, Blanco, Burnet, Caldwell, Hays, Lee, Llano, Mason, San Saba, Travis and Williamson.

District No. 8: Calhoun, Colorado, DeWitt, Fayette, Goliad, Jackson, Lavaca, Matagorda, Victoria and Wharton.

District No. 9: Austin, Brazoria, Burleson, Fort Bend, Galveston, Grimes, Harris, Madison, Montgomery, Polk, San Jacinto, Waller, Walker and Washington.

District No. 10: Angelina, Chambers, Hardin, Jefferson, Jasper, Liberty, Nacogdoches, Newton, Orange, Sabine, San Augustine, Shelby and Tyler.

District No. 11: Anderson, Cherokee, Freestone, Henderson, Houston, Leon, Panola, Rusk, Smith and Trinity.

District No. 12: Bell, Bosque, Brazos, Comanche, Coryell, Erath, Falls, Hamilton, Hill, Hood, Johnson, Limestone, Milam, McLennan, Navarro, Robertson and Somervell.

District No. 13: Archer, Baylor, Callahan, Clay, Eastland, Foard, Haskell, Jack, Knox, Palo Pinto, Parker, Shackelford, Stephens, Throckmorton, Wichita, Wilbarger and Young.

District No. 14: Collin, Cook, Dallas, Delta, Denton, Ellis, Fannin, Grayson, Hopkins, Hunt, Kaufman, Lamar, Montague, Rains, Rockwall, Tarrant, Van Zandt and Wise.

District No. 15: Bowie, Camp, Cass, Franklin, Gregg, Harrison, Marion, Morris, Red River, Titus, Upshur and Wood.

Chapter XIV—Assessments.

Section 1. An assessment of $15.00 per capita on the membership of component county societies, shall be levied each year, and shall constitute the State Association dues. This assessment shall be collected by the constituent county society secretaries, and forwarded without delay to the State Association Secretary, and the State Secretary shall duly receipt therefor. This assessment, when so collected and forwarded, shall be divided by the Trustees as follows: To the Medical Defense Fund, $1.00; subscription to the Texas State Journal of Medicine, $2.00 and to the General Fund, $12.00.

Sec. 2. The Medical Defense Fund, consisting of the per capita assessment made therefor, as per Section 1 of this Chapter of the By-Laws, shall be set aside by the Trustees for the use of the Counsel on Medical Defense, in accordance with the provisions of this Constitution and By-Laws.

Sec. 3. That portion of the assessment provided herein for subscription to the Texas State Journal of Medicine, shall be set aside by the Trustees for that purpose, and it shall be considered and accepted as would subscription fees collected for a publication not under the control of the State Association, provided nothing herein may serve to inhibit the Trustees in the control and expenditure of the fund thus accumulated.

Sec. 4. The Trustees may divide the General Fund, herein provided for, into such funds as may be for the best interests of the Association, and may make appropriations therefrom to meet the requirements of the Association.

Chapter XV—Rules of Conduct.

Section 1. The Principles of Medical Ethics of the American Medical Association, as at present published, or as hereafter amended, shall govern the conduct of the members of this Association in their relationship to each other and the public.

Chapter XVI—Rules of Order.

Section 1. The deliberations of this Association shall be governed by parliamentary usages as contained in Roberts' Rules of Order, unless otherwise provided by this Constitution and By-Laws.

Chapter XVII—Amendments.

Section 1. These By-Laws may be amended at any Annual Session by a majority vote of the House of Delegates, after the amendment has laid on the table one day.

RELYING ON CHIRO IS LIKE TOTING BUCKEYE.

Do you wear a bag of asafetida around your neck to ward off contagion?

Do you carry a buckeye or a piece of cut potato in your pocket as a protection from rheumatism?

Do you get a voodoo doctor to treat you for cancer with "herb medicine," such as did the Michigan farmer whose recent death is being investigated by state officials?

Perhaps not, but you may believe that smallpox and soft corns are the result of subluxated vertebrae pressing on spinal nerves and, so believing, rely on chiropractic for the relief of human ailments.

If so, you must view tolerantly those who wear the asafetida, carry the buckeye and deal with voodoo doctors, for chiropractic methods are not one whit more scientific.—*Hygeia.*

THE SCIENTIFIC EXHIBIT.

The Committee on Scientific Exhibit is desirous that exhibits shall be presented in a way that will emphasize their scientific value. This may be done by carefully worded explanatory placards, but particularly by personal demonstration. (The committee requires that all booths shall be in charge of a competent demonstrator.) The committee points out that the general attractiveness of the exhibit is essential; the committee will do its part by having the

booths decorated appropriately. The total amount of space available for exhibit purposes is approximately the same as that of last year (10,000 square feet). From the interest already manifested in the next Scientific Exhibit, it is evident that large blocks of space cannot be assigned to individual exhibitors.

A fully equipped Motion Picture Theater for talks illustrated with lantern slides or motion pictures will be an adjunct of the Scientific Exhibit; it will be located on the second floor of the Casino at the entrance of the Pier.

The committee will make no assignments previous to March 20, in order that the amount of space available may be apportioned to the best advantage of all concerned. All applications must be received before this date. Those desiring application blanks should send in a request to the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn street, Chicago.—*Jour. A. M. A.*, Jan. 17, 1925.

FOUR RECOVERED LEPERS DISCHARGED FROM NATIONAL LEPROSARIUM.

Four lepers who went to U. S. Marine Hospital No. 66, Carville, Louisiana, the National Home for Lepers, a few years ago, have been discharged, according to a statement made today by Surgeon General Hugh S. Cumming of the United States Publish Health Service. They are no longer a menace to the public health, the disease having been cured, or, according to official parlance, "arrested." The conditions under which lepers are released from this institution are exceedingly rigid. They require special observation for a period of one year, including monthly bacteriological examinations to show that the leprosy bacillus is absent from the tissues. Certification of cure is also required from a board of three medical officers stationed at the hospital and experienced in leprosy.

The treatment at Carville includes the use of chaulmoogra oil, special preparations of mercury used intravenously, *x*-ray therapy, surgery of superficial areas of involvement, hydrotherapy, and the violet ray. The results of treatment have been sufficiently encouraging at this institution to induce numerous other patients, of whom there are believed to be several hundred in the United States, to agree to their transfer. A special car fitted up for the purpose, and carrying a doctor and a nurse, was used in the transfer last week of eleven patients from Florida, and seven were brought from California. There are at present 236 leper patients at Carville.—*U. S. P. H. S. Health News.*

REGENERATION OF THE PANCREAS FROM THE PANCREATIC DUCT.

N. F. Fisher, Dallas, Texas (*Journal A. M. A.*, Aug. 16, 1924), has studied the growth of the new pancreas tissue from the pancreatic duct remnants. The experiments were suggested by the regeneration of pancreas tissue from the pancreatic duct stump in totally depancreatized dogs kept alive with insulin. More than 0.5 gm. of normal pancreas tissue regenerated in the course of eight months at the end of which time the animal was killed. For the transplantation experiments, pieces of pancreatic duct about one-fourth inch in length were taken from pups several days old and transferred to hosts 10 weeks of age. The transplanted tissue was allowed to remain from forty to sixty days and was then removed and submitted to microscopic examination. It is very evident that there is a great tendency toward the proliferation of new duct tissue. In almost every case, when the pancreas was removed from the base of the duct, new ducts were formed to establish functional union between the pancreas and the duodenum. This formation of new ducts confirms and extends the results of previous workers with regard to the capacity of the pancreatic ducts to form new duct tissue. In two cases, a new duct grew from the base of the old duct, away from the pancreas remnant, and at its end supported normal pancreas tissue. The regenerated pancreas was more than 2 inches removed from the pancreas tissue left at the time of operation. Pancreatic duct tissue transplanted to other parts of the body of the same animal or other animals of the same species will proliferate new duct tissue.

AMERICAN BOARD OF OTOLARYNGÓLOGY.

The American Board of Otolarygology will hold its first examination during the meeting of the American Medical Association in Atlantic City, May 25 to 28.

According to the rules of the board, applicants are divided into three classes, as follows:

Class 1. Those who have practiced otolaryngology ten years or more.

Class 2. Those who have practiced otolaryngology five years and less than ten years.

Class 3. Those who have practiced otolaryngology less than five years.

The type of examination is different for each class.

The secretary, Dr. H. W. Loeb, announces that thus far over three hundred applications have been received.

INTERSTATE POST GRADUATE ASSEMBLY CLINIC TOUR.

All aboard for the Interstate Post Graduate Assembly Clinic Tour of American physicians to Canada, British Isles and France!

As has been previously announced in several numbers of the *Journal*, the above tour, under the auspices of the Tri-State District Medical Association, will start at Chicago, May 17. Clinics in Toronto and Montreal will be visited, and the two ships that have been chartered to take the physicians abroad, the Ansonia of the Cunard Line, and the Doric of the White Line, will sail from Montreal, May 23. Dr. Charles H. Mayo, of Rochester, Minnesota, will be the presiding officer of the tour, and Dr. Wm. B. Peck, of Freeport, Illinois, the managing director. Hospitals and clinics in the following European cities will be visited: London, Liverpool, Manchester, Leeds, Dublin, Belfast, Glasgow, Edinburgh, Newcastle-upon-Tyne, and Paris.

Among the numerous social functions will be a reception by Prof. Theodore Tuffier at his country villa which is located near Versailles, and at London, the conferring of the honorary membership of the association upon H. R. H. Duke of York, and many other men prominent in British affairs.

The cost of the tour, including traveling expenses, will be under $1,000. Reservations for this trip can be made by sending a reservation fee of $65.00 per person to Dr. Wm. B. Peck, managing-director, Freeport, Illinois.

A STUDY OF THIRTY-FOUR CASES OF ABSCESS OF THE LUNG.

A study was made by J. J. Singer and Evarts A. Graham, St. Louis (*Journal A. M. A.*, July 21, 1923), of thirty-four cases of lung abscess. Eight cases followed tonsillectomy. Of thirteen patients

submitting to operation, six died, a mortality of 46 per cent. A third patient operated on died several months later with extensive carcinomatous metastases. The authors state that abscess of the lungs is being recognized more today than heretofore. The large number of tonsillectomies done is one factor which is responsible for what is apparently a greater number of abscesses than formerly. Early recognition and operation before the abscess has become chronic frequently prevents the failure of treatment, although many patients will recover with nonsurgical treatment. Careful history taking, physical signs, use of the röentgen ray and diagnostic pneumothorax make early recognition possible. Patients who do not recover in two or three months need surgical treatment.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES.

Antimony Thioglycollamide.—The triamide of antimony thioglycollic acid. It contains not less than 30 per cent of antimony. Antimony thioglycollamide and antimony sodium thioglycollate have been tested on rats, rabbits and dogs inoculated with trypanosomiasis by Rowntree and Abel. These workers suggested the employment of these antimony compounds in the treatment of human trypanosomiasis and the larger animals. Randall has used both of these antimony compounds intravenously and intramuscularly in granuloma inquinale with marked success. In the doses employed they were less toxic than tartar emetic and the results were more favorable. From the available evidence the experimental use of these compounds in kala azar would seem to be justifiable. Hynson, Westcott & Dunning, Baltimore.—*Jour. A. M. A.*, Feb. 7, 1925.

Hoyt's Protein Cereal.—Hoyt's special gluten flour (New and Nonofficial Remedies, 1924, p. 195) cooked and made into flakes. Pure Gluten Food Company, Brooklyn, N. Y.

Mercurettes-P. D. & Co.—Briquettes, each containing finely divided metallic mercury 3.25 Gm. (50 grains) incorporated with theobroma (cacao butter) and perfumed. The actions and uses of mercurettes are the same as those of ointment of mercury U. S. P. It is claimed that in the treatment of syphilis and certain forms of parasitic skin diseases where ointment of mercury has been employed, the use of mercurettes permits a more accurate dosage and is more convenient and less disagreeable. Parke, Davis & Co., Detroit.

Tablets Iodo-Casein with Chocolate.—Each tablet contains iodo-casein (New and Nonofficial Remedies, 1924, p. 156) equivalent to 0.01 Gm. iodin. H. K. Mulford Co., Philadelphia.—*Jour. A. M. A.*, Feb. 28, 1925.

PROPAGANDA FOR REFORM.

The Mollgaard Method in Tuberculosis.—The recently published book by Mollgaard and his collaborators on the new gold treatment of tuberculosis gives the properties of "Sanocrysin," which is sodium aurothiosulphate and the animal experiments which have been carried out. The serum from calves previously injected with killed tubercle bacilli and tuberculin, which is used in connection with the gold salt, is regarded as an antitoxic serum that neutralizes toxins liberated in the tuberculous animal by the action of the drug. Tests are reported on the effect of "Sanocrysin" and serum in calves injected intravenously with bovine tubercle bacilli. The results are said to be favorable but the evidence is not convincing. The clinical reports in the book reveal that the treatment is of no value in miliary tuberculosis or in tuberculous leptomeningitis and that in advanced and serious cases of pulmonary tuberculosis the treatment is perilous and offers "only a slight chance of recovery." It remains to be determined whether any better results can be obtained with the Sanocrysin-serum treatment than without it. There does not appear to be any reason for imagining that the particular gold salt used by Mollgaard can have any different effect than the other gold salts which have been investigated in the past and abandoned. At present there is no justification for rushing into the treatment of tuberculosis with this drug.—*Jour. A. M. A.*, Feb. 14, 1925.

Yadil Blows Up.—Yadil was supposed to be an esoteric form of garlic. It was heavily advertised throughout the British Isles and to a small extent in the United States. Then came a bomb in the form of an exposure of Yadil published in a London paper. It was a report of an analysis by an eminent chemist, which declared Yadil to consist of 1 part formaldehyd, 4 parts of glycerin, 95 parts of water and a smell. A second report was from a well known pharmacologist. There were three results from the explosion. The first and most important was that the sale of Yadil almost ceased. The second was an action for libel by the Yadil concern against the newspaper and the scientists. The third was the application by the "patent medicine" concern to prohibit further publications. The injunction was refused. Now the Yadil concern is in bankruptcy and its action for libel has been dismissed by the court.—*Jour. A. M. A.*, Feb. 14, 1925.

Endocrinology and the Mammary Gland.—Adverse reports have recently been published in regard to the alleged functions of preparations of the mammary gland. A survey of the literature might lead one to believe that the activity of this structure is in some way related to the menstrual function and that the gland exerts an inhibitory effect on the ovary. Yet carefully controlled administration of mammary gland substance, by Charlton and Rickey, to women of reproductive age has failed to furnish evidence of constant effects, if any, on ovarian activity in persons with normal or abnormal menstrual histories. The possible influence of mammary substance on the estrual cycle of animals has also been studied. The results were entirely negative. In no instance was any effect from feeding mammary gland apparent. The facts at hand fortify the position of the Council on Pharmacy and Chemistry to omit mammary gland preparations from New and Nonofficial Remedies because there is no clear cut evidence to show that administration of available products is of value.—*Jour. A. M. A.*, Feb. 7, 1925.

Karnak, Another Anti-Volsteadian Nostrum.—Karnak is put out by the Drug Products, Inc. It admittedly contains 18 per cent of alcohol by volume. Karnak is claimed to be "composed of nine of the most beneficial roots, barks and herbs known to medical science." Though it is well established that alcohol is habit forming, Karnak is claimed to be free from injurious or habit forming drugs. The analysis of Karnak made in the A. M. A. Chemical Laboratory indicated that the preparation contains no active drugs in sufficient amounts to produce physiologic effects in ordinary doses. In view of its findings, the Laboratory obtained the aid of Dr. Hugh McGuigan, head of the department of pharmacology of the University of Illinois. Dr. McGuigan carried out tests on dogs and on men and reported that this concoction is not sufficiently medicated to prevent its use as a beverage.—*Jour. A. M. A.*, Feb. 7, 1925.

Felsol.—In the advertising of the American Felsol Co., Felsol is claimed to have the following composition: "Metozin 0.9 (containing Phenazon 0.25, Anilpyrin 0.4, Jodopyrin 0.25), caffein 0.1, digitalis and strophanthus glycosides 0.0015 and the alkaloid of lobelia inflata 0.005." Felsol is a typical illustration of an irrational shotgun mixture. One of the claimed ingredients, metozin, is stated to contain phenazon (antipyrin), anilipyrin (a mixture of antipyrin and acetanilid) and iodopyrin (a compound of antipyrin and iodin). In addition to these multiple and antipyretic ingredients, the product is claimed to contain four other active drugs. According to the circular, Felsol "gives the busy physician a handy, convenient and harmless remedy which may be given for any kind of bronchial or cardiac asthma, without the necessity on the part of the physician to embark on long theoretical considerations as to the underlying cause of the attack." A product that contains preparations of digitalis, strophanthus and lobelia is not a "harmless" remedy. The recommendation for the indiscriminate use of this product is to be strongly condemned.—*Jour. A. M. A.*, Feb. 14, 1925.

Befsal, Another Alleged Synthetic.—Befsal seems to be exploited from two sources: Dr. S. Lewis Summers, Fort Washington, Pa., and the Synthetic Organic Products Co., New York City. Each exploiter gives an alleged formula for the product, but the two formulas are totally dissimilar. The preparation is extensively puffed by Lambert Ott, M. D., who a number of years ago, sang the praises of A. F. Sal. In reply to an inquiry, Dr. Ott states that Befsal can be obtained from C. A. Harold, a pharmacist in Philadelphia; he speaks of the product as "benzylethyl esters of pyruvic acid compound of methylene disalicylic acid." Fifteen or more years ago, S. Lewis Summers was piloting the Organic Chemical Manufacturing Co. which put out a line of "Formosol" compounds. One was A-F-Sal (also sold under the name Urasol), claimed to be "Acetyl-Methylene-Disalicylic-Acid." This substance is alleged to be the basis of Befsal. In his investigation of the value of internal antiseptics, made for the Council on Pharmacy and Chemistry, Sollmann reported that he found A-F-Sal nauseating and found no evidence that formaldehyd was split off in the body, or that the compounds had any discoverable antiseptic action on the urine. The findings of Sollmann were confirmed by the Council. In view of inquiries received, the A. M. A. Chemical Laboratory examined Befsal. A specimen obtained from G. A. Harold was a black powder, having an odor resembling certain types of fertilizer. The laboratory found that this could not be considered a "synthetic," but appeared to be a crude mixture. A specimen from the Synthetic Organic Products Co., differed materially from the first: like the first, it was a mixture of substances. The Laboratory concluded that the product known as Befsal is of varying unreliable composition and that it is unlikely that such a substance as dibenzyldiethylmethylenedisalicylic-dicinchominic acid can exist.—*Jour. A. M. A.*, Feb. 21, 1925.

Barbital and Unessential Modifications. — The British Medical Journal discusses the multiplicity of barbituric acid hypnotics which English physicians are importuned to prescribe. In America a similar condition exists. The numerous barbital derivatives and mixtures of these with other drugs result from the fact that we have no satisfactory method of evaluating the hypnotics. Apparently the proprietary interests have taken advantage of this situation, so that the proponents of these barbital derivatives claim various specific advantages for them. British physicians complain of the many market names for substances which have practically the same action, yet with no indication of their derivation from the original and best known drug, barbital. In this country, the Council on Pharmacy and Chemistry provides information concerning the composition and actions of just such products. Until scientific investigators have devised a satisfactory evaluation of this class of hypnotics, it would be much more in keeping with scientific advancement were proprietary houses to refrain from putting out new derivatives, and physicians to limit their prescriptions to the two drugs, barbital and phenobarbital, the only barbital preparations which have been accepted for New and Nonofficial Remedies. The danger to the public of the use of barbital hypnotics is of growing concern. Barbital, itself, has been the cause of many accidental deaths, and its use is not free from addiction. In England, barbital is included in the poison schedule and further restrictions of its sale is now being considered there.—*Jour. A. M. A.*, Feb. 7, 1925.

Raz-Mah, Another Asthma and Hay-Fever Nostrum.—Are you kept awake by asthmatic attacks or hay fever? "To sleep tonight, use Raz-Mah today." This is the slogan for a nostrum put out by Templetons, Inc., of Detroit, for sale in the United States and by Templetons, Ltd., Toronto for sale in Canada. An analysis made in Canada about four years ago showed that each Raz-Mah capsule contained a little more than 4 grains of acetylsalicylic acid about ½ grain of caffein and 8/10 of a grain of boneblack. About the same time the A. M. A. Chemical Laboratory made some tests and also reported finding acetylsalicylic acid, caffein and charcoal. An examination recently made in the A. M. A. Chemical Laboratory showed that Raz-Mah was essentially a mixture of acetylsalicylic acid, caffein and an iodid. Another sample of Raz-Mah, however, contained no iodid. The presence of iodid seems to be accidental and for all practical purposes, Raz-Mah may be considered to be composed of acetylsalicylic acid and caffein.—*Jour. A. M. A.*, Feb. 28, 1925.

Viriligen, Glandular Comp. and Pineal Comp. Not Accepted for N. N. R.—Viriligen (G. W. Carnrick Co.) is marketed in tablets, capsules and ampules, each of which is stated to contain "desiccated extracts of anterior pituitary, suprarenal cortex, lymph, brain and spinal cord substance, testis and 1/10 gr. thyroid." It is claimed that the preparation is "indicated in lowered virility and sexual neurasthenia of functional origin." There is no evidence that extracts of the anterior portion of the pituitary, suprarenal cortex, lymph, brain, spinal cord and testis have any therapeutic value in sexual neruasthenia or lowered virility (sexual capacity). The Council on Pharmacy and Chemistry found Viriligen inadmissible to New and Nonofficial Remedies, because (1) its composition is indefinite; (2) the therapeutic claims are unwarranted, and (3) it is an unscientific mixture.

Glandular Comp. (Male) Special Formula No. 1 (G. W. Carnrick Co.), comes in tablets and capsules which are stated to contain "Thyroid" 1/10 gr., "Pituitary" 1/40 gr., "Suprarenal" ¼ gr., "Orchic" ¼ gr., "Physiological Salts Comp." ¼ gr.

Glandular Comp (Female) Special Formula No. 2 (G. W. Carnrick Co.), comes in tablets and capsules claimed to contain "Thyroid" 1/10 gr., "Pituitary" 1/40 gr., "Suprarenal" ¼ gr., "Ovarian" ¼ gr., "Physiological Salts Comp." ¼ gr.

Zinc Salts in Gonorrhea.—The so-called zinc borosalicylate preparations which are at present being exploited for the treatment of gonorrhea are not new. Such a preparation was exploited in Germany ten or fifteen years ago under the name of "Dr. A. Foelsing's Mucosan;" analysis made about that time

threw doubt on the claim of its being "a definite compound;" rather, under the scrutiny of German chemists, the product seemed to be a loose combination of zinc salicylate, salicylic acid and boric acid. Recently, there has been an active campaign to influence American physicians to use the product, this time under the proprietary names of "Neisser-San-Kahn" (York Laboratories, York, Pa.) and Zinc-Borocyl (Al Sano Chemical Products Co., Chicago). Both are recommended for genito-urinary work, particularly local infections of the urethra. The Council on Pharmacy and Chemistry, in its report on these two products, stated that the submitted evidence failed to show that the preparation claimed to be zinc borosalicylate has any advantage over established zinc salts; that zinc sulphate is indicated in only certain forms of urethritis, and that the use of substances that are unessential modifications of established drugs is unscientific, serves no useful purpose, and is not in the interest of rational scientific therapy.—*Jour. A. M. A.*, Feb. 28, 1925.

"Organ-O-Tones."—From the advertising, it appears that the Cole Chemical Co. is engaged in the marketing of "shotgun" mixtures, largely of the "pluriglandular" type. For a year or more it has been "pushing" a mixture "for obesity" designated "Organ-O-Tones No. 19." The preparation is marketed in capsules which have been stated to contain: "Thyroid Substance" ½ gr., "Pituitary (whole)" ¼ gr., "Phytolaccin" ½ gr., "Apocynum (P. E.)" ¼ gr., "Organ-O-Tones No. 12" (composed of sodium bicarbonate, potassium bicarbonate, calcium glycerophosphate, calcium phosphate (dibasic) and magnesium phosphate, 3½ grs. It is evident that Organ-O-Tones No. 19 for Obesity is an irrational mixture which depends for its action as an "obesity" remedy on the thyroid which it contains. The firm's advertising does not stress the formula, and hence it is probable that those who use this preparation do so without full appreciation that they are administering thyroid. More than sixteen years ago, Reid Hunt and Atherton Seidell called attention to the misuse of thyroid as an ingredient of "antifat" nostrums. Since then the ill effects of thyroid as an antifat have become well established. Recently, H. S. Plummer and Wm. Boothby warned against the uncontrolled use of thyroid in obesity.—*Jour. A. M. A.* Feb. 28, 1925.

Butyn and Epinephrin.—As a result of animal experiments recently reported by Hirschfelder, Backer and Jennison, "the addition of epinephrin to solutions of cocain and saligenin increases their tendency to cause local edema. This is not the case with procain and butyn." According to New and Nonofficial Remedies, 1924, the use of butyn for injection anesthesia or for special anesthesia does not appear promising, since its toxicity is materially greater than that of cocain. Butyn is a substitute for cocain in surface anesthesia as for the eye, nose and throat; it acts through intact mucosa almost as effectively as cocain; solutions of butyn are nonirritant.—*Jour. A. M. A.*, Feb. 28, 1925.

NEWS

Marion Morton Hospital Will Be Built at Haskell, Texas, according to the provisions of the will of Mrs. Marion Morton of that city. A fund of $50,000 is bequeathed for the purpose of the erection of this hospital as a memorial to her husband.

A Medical Building for Littlefield.—A modern two-story brick building is being erected at Littlefield, Texas, the lower floor of which will be rented as a drug store. The upper floor will contain an operating room and several wards for patients, besides offices for doctors and dentists.

Dallas Sanitarium, a $1,000,000 Methodist Hospital, is being built in Oak Cliff. To date more than $200,000 has been invested in the property and building. The grounds on which the hospital is being built consist of 12 acres of land situated at the intersection of Bishop Avenue, Colorado Street and Ballard Avenue. The first story of the building will be of Bedford stone and the remainder of the walls will be of light brick, trimmed with cream terra cotta.

Tyler's Four-State Hospital and Training School for colored people will be built in Dallas soon, according to the announcement of the Rev. J. A. Tyler (colored) of Dallas, who has been working for the erection of this hospital since 1922. This hospital will serve Texas, Oklahoma, Louisiana and Arkansas. Tyler states that he is receiving encouragement and also financial aid not only from members of his own race, but also from many white people of the State, among whom are many State officials and members of the Legislature.

The Eleemosynary Bill Receives the Governor's Signature.—The Eleemosynary Bill, known as House Bill No. 249, has become a law. Although the bill was changed considerably from its original form, its passage nevertheless represents a distinct advance in the effort to provide adequately for the care and treatment of the insane of this State. Among other provisions of this bill are: The appointment of a Director of Mental Hygiene at a salary of $7,500 per annum, who shall direct and coördinate the activities of all State institutions dealing with the insane; authority is given the Board of Control to divide the State into hospital districts and to designate the State hospital to which the insane from each district shall be admitted; the salaries of the superintendents of the State Hospitals at Austin, Rusk, Terrell, Wichita Falls, Abilene and San Antonio, and the two new psychopathic hospitals to be built in Galveston and Dallas, are fixed at $4,000 per annum; a psychopathic hospital is to be erected at Dallas and another at Galveston, and each of these institutions will be available for teaching psychiatry to students of Baylor University at Dallas, and of the Medical Department of the University of Texas, at Galveston, respectively. Although the provisions of this bill are not by any means ideal, it is felt, nevertheless, that this legislation is a much needed step in the right direction.

SOCIETY NEWS

Bexar County Medical Society met March 5, 1925, with 70 members and 5 visitors present.

Captain Wm. D. Gill, M. C., Station Hospital, Fort Sam Houston, read a paper on "Fractures About the Orbit." He read the case histories of 27 cases that he had seen. Pictures of most of these cases giving the results obtained from operation, were shown on the screen.

One patient who had been operated for a very extensive orbital fracture with excellent results, was shown before the society.

The instruments particularly valuable in this kind of surgery were also shown.

Dr. F. H. Rosebrough complimented the essayist on the splendid results obtained and the valuable information given in this class of fractures. The majority of the cases that he had seen had been in the capacity of a consultant, so that his experience in an operative way had been *nil.*

There were two broad general symptoms (1) hemorrhage, and (2) changes in the position of the

eyeball. There may be exophthalmos from the presence of hemorrhage, dislocation of the bony fragments, emphysema, etc. Enophthalmos may occur from enlargement of the apex of the orbit. Diminution of the contents of the orbit may occur from cicatricial bands or disturbance of the facial connections between Tenon's capsule and its connections. The symptoms depend upon what soft parts are damaged; those to the eyeball itself may be very simple or most severe; the optic nerve may be injured from tearing or compression, from bleeding outside, stretching or bleeding within its own sheath or substance. Impairment of vision may be either temporary or permanent and the different structures of the orbit can be secondarily or primarily affected. Injuries to the vessels apart from tearing may be caused by pressure. The most frequent permanent injuries may be merely a diminution of vision, interference with the movements of the eyeball or eyelids, exophthalmos or cicatricial contraction.

Dr. H. H. Ogilvie reported a case of empyema following a lobar pneumonia, which he had treated with the new Merck preparation, pneumoquin. The first examination of a small amount of aspirated fluid showed a pure culture of pneumococcus. As much fluid as possible was then withdrawn and one ounce of an aqueous solution of 5 grs. of the drug introduced. In less than twenty-four hours the temperature dropped to normal and seventy-two hours later the examination of a small amount of aspirated fluid showed only twelve colonies to the ordinary Petri dish, and these growths were very feeble. The patient made an uninterrupted recovery. The doctor showed a very ingenious method he had devised for the use of ambulatory patients suffering from empyema. An ordinary condom or toy balloon was so fastened over the drainage tube that dressings could be done away with, a great advantage to the ambulatory case.

Dr. Howard M. Bush reported on three cases of empyema treated with gentian violet. He stated that Churchman reported on its use in 27 cases and the results obtained seemed to justify its further trial. He had reported that 51 per cent were cured, 29 per cent came to operation and were cured, and 18 per cent died, but all of this 18 per cent had an associated bronchial pneumonia. As much fluid as possible is withdrawn and 100 c.c. of a 1-1000 gentian violet solution injected. In a day or two the same amount of a 1-500 solution is introduced, and the next day 100 c.c. of a 1-250 solution is injected. The second aspiration is usually sterile.

The first case reported by Dr. Bush was that of a lady, aged 35, who had received every known treatment for empyema, including a rib resection. After this treatment there was marked improvement at once, her temperature began to drop, and in six weeks she was entirely well. The second patient was a man of 45, who fell from a roof, sustaining a fractured rib, which was complicated by empyema. There was cardiac decompensation, edema, etc. Fluid was withdrawn and a lateral rib resection was done and gentian violet injected. A cure resulted, although he had been treated for a long time prior to this treatment without avail. In the third case of empyema a pneumococcus infection first was treated by the closed method with the gentian violet injection, and a second withdrawal showed a great lessening of the number of colonies. A rib was resected, with complete recovery.

The discussion was opened by Dr. Hiram A. Phillips, who complimented Drs. Ogilvie and Bush on the results they had obtained and believed these methods were applicable to the simple acute case, but that the old chronic cases of bronchial fistula, etc., required more severe methods. In 1914, he had treated 37 cases of empyema due to the pneumococcus by simple rib resection and with 100 per cent of cures. In the epidemic of 1918 and 1919, he had found that different methods must be employed. He had operated on 80 cases that had failed to get well by rib resection. Where the tube had been left in the chest there was a periosteal ring that interfered with complete closure because there was only a small amount of drainage; cure usually resulted after removal of this bony ring.

The majority of the worst cases in the army had gravitated to the Walter Reed Hospital where Major Keller had devised and perfected a method for treating these cases, which had been characterized by Surgeon-General Ireland as the outstanding medical or surgical achievement of the war. Major Keller had observed that the chief reason for not curing these old cases was because there were multiple cavities, and unless all of them were opened and drained, healing could not result. He made a complete incision through all cavities and packed them with two per cent gentian-violet-saturated gauze, which within twenty-four to forty-eight hours decorticated the lung. He operated in many stages, stopped when the blood pressure reached 90 systolic, and the mortality was nothing and the results marvelous.

Dr. I. S. Kahn thought that from the standpoint of the internist, the principal thing is the diagnosis, which is not always as easy as the text-books would have one believe, as the classical symptoms are not always present. With chunks of fibrin in close proximity to a bronchus there may be increased breath-sounds and signs suggestive of pneumonic consolidation. In tapping a chest, the needle used is often too small. He advised a 13 gauge needle as being less apt to cause a mistake in diagnosis. As a general rule, he considered that injections inside the pleural cavity had not been very successful, there being not over one or two per cent of recoveries from formalin and glycerin injections. Many empyemas that fail to close are of tubercular origin.

Dr. Dudley Jackson thought that a large per cent of failures in these old chronic cases were due to the fact that many of them were really lung abscesses. He thought that the method mentioned by Dr. Phillips of wide dissection in many stages, with the addition of the cautery as practiced by Dr. Graham of St. Louis, first having secured adhesions of the pleura to the chest wall, would cure a large per cent of these cases that are often considered incurable.

Dr. Potthast said that since he had suffered the inconvenience of the soiled dressings incident to a rib resection, he would welcome any new closed method such as that described by Dr. Ogilvie.

Capt. Wm. D. Gill stated that he had been fortunate in seeing some of this work at the Walter Reed Hospital, and thought it should not be forgotten that gentian violet could only be effective on organisms that were gram positive. He thought that the solution used at that hospital was much stronger than the one reported by Dr. Bush.

Dr. Dwight R. Knapp was elected to membership.

Bexar County Medical Society met March 12, 1925, with 50 members present.

Transfer of Dr. Charles N. Castner, Superintendent of the Southwestern Insane Asylum, from Cherokee County Medical Society, was announced.

Dr. Irving T. Cutter reported a very interesting case of hydatidiform mole. This case was diagnosed before death, but the patient's condition was so serious that an operation could not be performed. Autopsy showed a large, flabby, pale uterus completely filled by a hydatidiform mole. This specimen was shown the society.

Dr. Lewis K. Beck showed the case of a Mexican woman, aged 21, who eight months previously had fallen from an automobile. She complained of a dizziness and headache, and two weeks later, noticed diminished vision in the left eye, followed by total blindness in the left eye two months after the injury. Then the same condition began in the right eye, and now the patient is totally blind. The tension in the left eye is diminished and in the right eye increased. The history and physical and laboratory findings were completely negative. Ophthalmoscopic examination revealed a complete detachment of the retina in the left eye and nearly a complete detachment in the right eye. The cause of detachment of the retina may be (1) a diseased condition of the vitreous with shrinking of the vitreous body, so releasing the pressure of the vitreous body which helps to hold the retina in its position, or (2) from a blow in which hemorrhage takes place between the choroid and retina. The symptoms generally come on gradually, just as in this case, and depend upon what part of the retina is detached.

The second case was that of a Mexican man, aged 23, who comp'ained of the same general symptoms, but instead of a detachment of the retina, he had an atrophy of the optic nerve in the right eye. A primary atrophy is due to any condition causing a sclerosis of the spinal cord, and tabes dorsalis is one of the most frequent diseases associated with the condition. The earlier the optic atrophy, the later the other signs of tabes will put in their appearance. An injury on the head will often result in optic atrophy, the symptoms of which may not begin to appear until weeks or months after the injury. This possibility should always be thought of in all cases of head injury. The first case shown is hopeless, but the second might get improvement, if it could be found that it was the beginning of a tabes. Up to date, all tests relative to tabes have been negative, but this might be the first symptom of that disease.

Dr. Scott Bronson opened the discussion. He had never seen just such a detachment as was shown in this case. There was no fundus or vessels visible in the left eye.

Dr. J. S. Steele thought that these were very hopeless but interesting cases. The blow on the head must have caused hemorrhage into the choroid.

Dr. O. H. Judkins thought that the industrial surgeon might be brought face to face with such a case, and such a possibility should always be thought of in any such injury. He had recently seen a case in which the patient tried to simulate partial blindness from a head injury, but it could easily be told that he was a malingerer.

Dr. J. A. McIntosh thought that therapy in tabetics was very limited after neurosyphilis has reached such a point as to produce an optic atrophy, but intensive treatment should always be tried.

Dr. I. L. McGlasson stated that he is an optimist on the treatment of syphilis in general and tabes in particular. In 1916, he reported on six tabetics who had recovered from the condition sufficiently to carry on very active business lives, and only one had died in the meantime, and his death was from pneumonia. One case had distinct trouble with the genito-urinary organs, in 1913, was intensively treated, and although he still has a few general symptoms, the genito-urinary symptoms have ceased.

Of 167 cases of cerebrospinal syphilis that finally found their way back to the Base Hospital at Fort Sam Houston after having missed all the different examining boards, only one had received adequate treatment; 84 did not know whether they had received any treatment, and 11 had received one dose of salvarsan. Of the six cases reported in 1916, all had been first diagnosed by the eye man, and he believed that there was no question but that oculists caught a very large per cent of these cases in their routine examinations.

Dr. Homer T. Wilson showed a small Mexican child who had received a very extensive burn on the hand and forearm. The operative technic performed for the relief of the cicatricial bands was described. The second case was that of a negro man with a second degree burn of five days duration—the same type of injury. A special splint used to maintain the fingers in extension, was shown. A straight splint was used for the forearm with a ratchet extension of the digits. The spring was so fastened to the metal end of the splint that constant extension of the fingers resulted. The third case was one of gangrene of the big toe. He first came into the hospital complaining of a black, painful swelling of the great toe of the right foot. The patient, now 32, had a clear history of lues at 16 with an interstitial keratitis at 18 years of age.

The examination showed usual signs of black gangrene. The cause might be (1) diabetes; (2) thrombo-angiitis obliterans; (3) arterial changes from arteriosclerosis with atheroma, usually due to lues. The plus Wassermann could be overlooked in lieu of the fact that there was a distinct history of luetic infection. The radial arteries showed advanced sclerosis. If gangrene could be recognized in its incipiency, hydrotherapy, alternate pressure and massage might cause a cure. With gangrene, one must of necessity amputate, the point of amputation depending upon the occupation of the patient, the underlying cause, etc. Many methods had been devised for detecting the extent of the nutritional disturbances. One method—but one not applicable to a patient of this color—was that of applying an Esmarch bandage to the limb, and then a tourniquet at the groin; when on releasing the tourniquet and removing the bandage, the flush of returning circulation and its point of ending could be seen.

Dr. P. I. Nixon asked as to the spinal Wassermann in the last case of Dr. Wilson's.

Dr. R. H. Crockett read reports in which it was advocated that total removal of the burned necrotic tissue would stop the absorption, and would produce much quicker results than with any other method.

Dr. Lee Rice stated that Harlon Brooks, of St. Louis, had devised a method of detecting the extent of the gangrene, that would be particularly applicable to this colored patient. An incision was made down to the femoral artery, Crile's clamps were placed on the artery and 10 c.c. of a 10 per cent sodium iodide solution was injected. An x-ray would then show the extent of arterial involvement, as this solution would be visible in the picture. Another way is by the simple thermopile, by which differences in temperature of the different areas can be easily ascertained.

Dr. J. W. Nixon, Jr., reported the case of a man severely cut on the left side of the chest, with penetration of the thorax. The lung was not injured, perhaps because its was collapsed. The patient made an uneventful recovery, although the drainage tube was lost in the chest cavity, but was easily found. In such a complication as losing the tube, a 25 to 50 per cent solution of glucose poured in the chest will cause the tube to float up to the surface. The second case was that of a negro woman, aged 29, who on February 19, while waiting on the table, suddenly experienced shortness of breath and a swelling in the throat. Examination showed that there was a large swelling of the anterior surface of the neck, which grew less with exhalation and greater with inhalation. A diagnosis of spontaneous rupture of the trachea was made. A bronchoscope revealed nothing

but blood. By the time the patient came to operation, she was breathing through a hole in the neck, one in the right axilla and one under the right breast. A square-shaped window was placed in the trachea and a large tracheotomy tube was inserted. The emphysema began to disappear and the patient made an uneventful recovery, and was presented before the society. The Wassermann and *x*-ray were both negative and exact location of the rupture of the trachea was not ascertained. In looking up the literature, he found one case reported by Zeuch of Chicago and two in foreign literature. In case the wound of the trachea is found, it mught be plugged with the sternocleidomastoid muscle or a piece of lung tissue.

Dr. Homer T. Wilson, in discussing this last case, thought the square hole in the trachea was very important.

Dr. P. I. Nixon had seen the case and had noticed a scar on the neck, which might have been a closed thyroglossal duct, and wondered if the rupture could have occurred through this duct.

Dr. O. H. Judkins thought this a most unusual case and complimented Dr. Nixon on the result obtained.

Dr. Lewis K. Beck asked as to the technic of the window in the trachea.

Dr. Nixon, in closing, stated that he had exposed the entire length of the trachea and could not see any place where a duct had been. He thought the square opening would be less liable to close if the tube slipped out of place. He had used a very large tube.

A resolution was adopted by Bexar County Medical Society commending the action of the Board of Health and of the School Physician in attempting to enforce the city ordinances requiring vaccination of school children as a protection against smallpox.

DeWitt County Medical Society met at Cuero, March 18.

After a luncheon given by the Cuero physicians at the City Hotel, the society adjourned to the Cuero American Legion Hall, where the regular monthly meeting was held.

The members of the society present were: Drs. G. T. Reuss, G. M. Duckworth, S. P. Boothe, J. W. Burns, Jr., J. C. Dobbs, J. R. Frobese, J. W. Hale, H. C. Eckhardt, H. H. Brown, Jr., R. M. Milner, W. E. Gillette, B. J. Nowierski and L. W. Nowierski.

The following visitors were present: Drs. J. H. Burleson, Thomas Dorbandt, S. R. Kaliski, Lee Rice, Dudley Jackson, I. L. McGlasson, I. S. Kahn and R. S. Adams, all of San Antonio, and Drs. C. T. Dufner, J. W. Weiss, E. H. Marek, W. Shropshire, C. L. Kopecky and F. W. Shircliffe, of Lavaca County Medical Society.

Dr. J. W. Burns, Jr., was elected to membership.

Dr. J. H. Burleson read a paper entitled, "Report of Clinical Cases." The first of these cases was one of herpes zoster of the regions supplied by the right supraorbital nerve. The second case was one of non-traumatic fundus hemorrhages.

Dr. Thomas Dorbandt read a paper on "Report of a Case of Syringomyelia."

Dr. S. R. Kaliski read a paper on "The Differential Diagnosis of Convulsions and Cyanosis of the Newborn."

Dr. Lee Rice read a paper entitled, "Use of Tryparsamid in Neuro-Syphilis and Paresis." Dr. Rice also read a paper on "Use of Sodium Thiosulphate in Mercurial Poisoning."

Dr. I. L. McGlasson read a paper on "Some Points on the Treatment of Syphilis."

Drs. J. E. Pridgen, J. W. Burns, Jr., and J. R. Frobese were appointed as a committee to furnish the program for the April meeting of the society.

El Paso County Medical Society met March 2, with 36 members and 3 visitors present.

Dr. R. L. Ramey read a paper entitled "The Importance of Careful Diagnoses in Abdominal Cases." He brought out the importance of a thorough examination in cases that present an obscure train of symptoms, stating that such cases are often subjected to unnecessary operation because they have not been sufficiently studied. As a result, the identical symptoms that were present prior to operation frequently return a few months postoperatively. Lantern slides made from *x*-ray pictures, illustrating cases in which such mistakes had been made, were shown. Three of these cases showed gallstones, and two cases showed stones in the kidney, ureter or bladder. The paper was discussed by Drs. W. L. Brown, F. D. Garrett, J. W. Cathcart, E. J. Cummins, J. W. Laws, G. Werley, W. W. Waite, and P. R. Casellas.

El Paso County Medical Society met March 9, with 30 members and one visitor present. The meeting was devoted entirely to clinical cases and case reports.

Dr. Harry Leigh showed a case of marked exophthalmos in a Mexican girl seven years of age. The condition was stated to have existed from birth. The family history was negative. The general physical examination was otherwise negative, except for a high arched palate. The *x*-ray pictures showed a thin skull and the orbits appeared to be shallower than normal. No diagnosis had yet been made in the case.

Dr. J. W. Cathcart showed three cases of oral carcinoma. The first case was that of a rancher, 46 years of age, who in August, 1924, had noticed an inflammatory nodule in the fold of the cheek, opposite the third left molar. The lesion had progressed slowly until at the present time it appears on the surface of the cheek and there are numerous metastatic nodules in the adjoining skin areas. The second case was that of a butcher, aged 57, who seventeen months ago had noticed a small pimple on the dorsal surface of the tongue. This broke down, forming an ulcer which was apparently healed up by radiation at the Scott and White Clinic, Temple. Several months later, the lesion again broke down and he took Abrams' treatment for four months. At first he thought that he was getting better, but he has now decided that he is getting worse. The third case presented by Dr. Cathcart was that of a machinist, aged 63, who on December 10, 1924, thought he had a "cold in his throat." There is present now a well developed nodular tumor, involving the left side of the uvula and anterior pillar of the pharynx. The treatment of these three cases has been a combination of radium and *x*-ray therapy. In the first two cases only palliative results are anticipated, but in the third case it is hoped that permanent relief will be secured by inserting radium needles into the tumor and blocking the deep lymphatics with radiation.

Dr. W. R. Jamieson reported the case of a woman, aged 32, who had complained of pain about an inch to the right of the umbilicus. She had had at least one operation and various diagnoses had been made, but her symptoms had never been relieved. Dr. Jamieson made the diagnosis of kink in the ureter, stating that localizing pain at the point above described, is characteristic in these cases. He treated the case by dilating the ureter with an injection of 12 per cent sodium iodide solution.

Dr. Branch Craig reported three cases of coeliac disease. These cases were treated at first by the old prescribed method of fat and starch-free diets, with soda enemas and occasional doses of castor oil The diet consisted of protein and lactic acid milk,

buttermilk, cottage cheese, gelatine, beef juice, beef broth, scraped beef and orange juice. One child could take very little milk of any kind and one tablespoonful of farina caused a temperature of 104° F. Another case could take little more than well diluted Dryco, while the third seemed to vomit everything, and he was afraid that this child would succumb to starvation. In October, 1924, he had read an article by Dr. Haas of New York, in which the latter reported successful feeding of coeliac cases with ripe bananas. A yellow banana is a carbohydrate, but when it is thoroughly ripe (with black specks on the peel), it is a sucrose. The banana should be beaten up into the consistency of mayonnaise dressing. The first day that these children were fed one-half of a banana, their temperature went up to about 101° F. The amount was increased and the stools soon improved, and the babies got better. The protein diet, soda enemas and occasional castor oil were continued while the bananas were being given. One child is now taking from 12 to 14 bananas daily. These children are all about two to two and a half years of age, and when they came in last fall they weighed about 17 pounds each. They are all still on protein, but with some added carbohydrate, and are now of normal weight with good color and happy dispositions. Two years ago Dr. Craig treated two cases of coeliac disease by the old method. They finally developed into normal children, but after a year of disappointments and discouragements. These cases were discussed by Drs. Werley, Leigh and Casellas.

Dr. W. P. Rogers reported a case of twins with separate placentae.

Dr. W. L. Brown reported a case of diffuse intestinal and peritoneal tuberculosis which had been mistaken for amebic dysentery. The patient was a Mexican 28 years of age, who stated that for three months previously he had not felt well and had had pains in the stomach, made worse by eating. He had lost 40 pounds in weight, but had been able to teach school until recently, when the pain had become much worse, and he had been confined to bed. His bowels moved four or five times during the night, always accompanied by much griping and he had an evening temperature of 100 to 101° F. Chest examination was negative. *X*-ray examination of the stomach showed it to be displaced to the left of the median line with apparent pressure on the upper third of the lesser curvature. Two out of three stool examinations showed occult blood; one showed ameba, and one showed free blood which was thought to come from the colon. The Widal was negative, and no Wassermann was made. The blood picture was as follows: leucocytes, 5,000; small monos, 16; large monos, 10; polys, 68; transitionals, 6; the hemoglobin was 65 per cent. The urine was negative. Because of the negative Widal and the positive report of amebae and blood in the stools and the marked diarrhea, the diagnosis of amebic dysentery was made. Postmortem, two months later, showed that this patient had a very diffuse intestinal and peritoneal tuberculosis. Tuberculosis had not been suspected in this case, because in spite of his diarrhea, the patient had appeared strong and hardy, and his lungs were apparently normal. This case illustrates the danger of making a diagnosis of amebic dysentery simply because amebae are reported in the stool, and also that a laboratory report on a stool in case of diarrhea is incomplete, unless the stool has been examined for tubercle bacilli.

Dr. W. L. Brown reported the case of a man, aged 33, who, in May, 1921, began having pain in the pit of the stomach, which came on 3 or 4 hours after eating (and sometimes before eating), but had never been severe enough to keep him in bed. He had no vomiting and he stated that eating did not relieve the pain. He showed no jaundice and physical examination was negative except for epigastric tenderness. *X*-ray examination showed an irregular filling defect in the first portion of the duodenum, with a first degree residue after six hours. A diagnosis of duodenal ulcer was made, and the patient was operated May 4, 1921. An old indurated duodenal ulcer was found which had recently perforated, the perforation being sealed against the under surface of the liver. The gall-bladder was not involved. The ulcer after being cauterized was closed and covered with a portion of gastrohepatic omentum, following which a posterior gastroenterostomy was done. Three months after the operation he began to complain of gas pains which have been more or less constant during the past four years. A recent *x*-ray examination showed that the entire barium meal was passing through the gastroenterostomy opening, indicating an obstruction at the pylorus. At operation this obstruction was found to be due to a kink in the duodenum. The ulcer had completely healed so that it was difficult to tell that one had ever existed. The duodenum was freed from the abdominal scar and the right lower corner of the omentum was stitched to the under surface of the liver, thus separating the duodenum from the gall-bladder and liver, and then the omentum was caught in the peritoneal sutures of the abdominal wound, so that the stomach and duodenum could not again form adhesions to the abdominal scar. Convalescence has so far been perfect, although it is too early to predict concerning adhesions. This case illustrates the importance of prophylactic measures against abdominal adhesions, and also illustrates how completely all evidence of a duodenal ulcer may disappear following cauterization and gastroenterostomy. This case report was discussed by Drs. G. Werley, W. W. Waite and O. Egbert.

Dr. Werley reported further on a case which he had reported to the society two weeks previously, that of a young boy having heartblock and rheumatism, following influenza. This patient has shown much improvement and Dr. Werley thinks that the condition was probably due to a toxic state. This case was discussed by Dr. W. W. Waite.

Falls County Medical Society met March 5, 1925, with 13 members present.

Dr. E. W. Bertner of Houston, and James Makins of Marlin, took part in the program.

Dr. N. D. Buie made a short report on the work done in his district, and concerning legislation of special interest to the medical profession.

Dr. Tom Glass was elected to membership.

Harris County Medical Society met February 28, 1925, with 48 members present. The regular monthly business meeting was called to order by the president, Dr. A. H. Flickwir.

Suitable resolutions on the death of Mrs. Lou Gore Green, wife of Dr. C. C. Green, were unanimously adopted.

Harris County Medical Society met March 7, 1925, with 57 physicians present. The following scientific program was rendered:

"Pituitary Tumors, Symptoms, Diagnosis and Surgical Treatment," by Dr. Louis Daily—discussed by Drs. M. D. Levy and F. J. Slataper; discussion closed by Dr. Daily.

"The Role of the Endocrine Glands in Certain Menstrual Disorders," by Dr. E. W. Bertner—dis-

cussed by Drs. J. H. Graves, and A. F. Greer; discussion closed by Dr. Bertner.

"Teaching and Control of the Tuberculous Patient," by Dr. W. H. Ross—discussed by Drs. Solomon David, J. H. Graves and A. H. Flickwir; discussion closed by Dr. Ross.

Harris County Medical Society met March 14, 1925, with 67 physicians present.

An amendment raising the dues of the society from $20.00 to $30.00 was adopted.

The following scientific program was rendered:

Dr. G. C. Lechenger of Galveston, reported, "A Case of Displaced Abdominal Viscera"—discussed by Dr. T. B. Vanzant, who reported two similar cases.

"Laryngeal Carcinoma, with Autopsy Specimen," by Dr. Louis Daily—discussed by Dr. Ehlers; discussion closed by Dr. Daily.

"Pus in the Urine," by Dr. John L. White—discussed by Drs. B. W. Turner, John T. Moore and Harold Turner; discussion closed by Dr. White.

Harris County Medical Society met March 21, 1925, with 38 physicians present.

The following scientific program was rendered:

Dr. P. R. Denman reported, "A Large Uterine Fibroid Removed by Local Anesthesia."

"A Case of Polycythemia" was reported by Dr. Alvis Greer. The case was discussed by Drs. J. H. Graves, W. T. Bryan, C. U. Patterson, and the discussion was closed by Dr. Greer.

"Total and Reserve Accommodation in Presbyopia," by Dr. F. J. Slataper—discussed by Drs. E. L. Goar, E. M. Arnold, W. M. Strozier and J. H. Graves. The discussion was closed by Dr. Slataper.

"Viceroptosis with Pendulous Abdomen After Age of Forty, Etiology and Treatment," by Dr. Joseph Henry Graves—discussed by Drs. C. U. Patterson, A. E. Greer, A. H. Flickwir and Solomon David. The discussion was closed by Dr. Graves.

Harrison County Medical Society met February 13, at which time the following officers were elected for 1925: President, Dr. G. P. Rains, Marshall; vice-president, Dr. L. A. Colquitt, Waskom; secretary-treasurer, Dr. R. G. Granbery, Marshall; delegate, Dr. J. A. Moore, Marshall; alternate, Dr. Rogers Cocke, Marshall; censors, L. S. Mahon of Elysian Fields, and G. P. Rains and R. G. Granbery of Marshall.

Hidalgo County Medical Society met at McAllen, Texas, March 19, with the following members present: Drs. J. W. Conard, J. A. Doss, J. W. Jeffries, J. G. Harrison, W. N. McGee, J. A. Miller, F. E. Osborne, J. D. Stephens, W. E. Whigham, J. G. Whigham, J. R. Mahone and McCallip.

Dr. J. A. Doss read a paper on "Diathermy," written by Drs. A. U. Desjardins and Ann Kelly of the Mayo Clinic. This paper was discussed by Dr. F. E. Osborne, who with Dr. Doss, had attended lectures on this subject in Dallas during the previous week.

Dr. J. R. Mahone read a paper on "The Importance of Reporting Communicable Diseases," which was discussed by a number of doctors present.

Dr. W. E. Whigham's resignation as secretary-treasurer was accepted, and Dr. J. R. Mahone of Pharr, was elected to fill out the former's unexpired term.

Dr. Salter was elected to membership.

Dr. Mahone was requested by the society to investigate a report made by Dr. J. G. Whigham concerning Mexican midwives who apparently have bogus certificates.

A resolution was adopted that Dr. John Hunter, who had so long and faithfully served the society as secretary, and who had recently left the valley, be given a letter of commendation from the society.

It was decided that the society should hereafter meet on the first Thursday of each month, and the next meeting was accordingly set for April 2, at Mission.

Lamar County Medical Society met at Paris, March 5, with 32 members and guests in attendance. After a seven o'clock dinner at the Gibraltar Hotel, Dr. J. I. Creed, one of the members of the County Hospital Committee, made a report on the progress of the new Lamar County Hospital. He stated that the building would have a full basement and two stories. The building will be fire-proof and will contain two operating rooms, *x*-ray and clinical laboratories, a clinical room for dentists and specialists, a lying-in room and a maternity ward. Mr. C. J. Mussleman, who is equipping the maternity ward and lying-in room, requested that these be furnished with the latest and best equipment.

Judge Lawrence, in discussing the new hospital, commended the doctors for the stand they had taken in endorsing the court's action in building a new hospital instead of remodeling the old building.

Dr. J. B. Chapman read a paper on "The Cancer Problem."

Dr. L. P. McCuistion opened the discussion, and was followed by a number of other members.

Lamar County Medical Society accepted an invitation from the Paris Sanitarium Staff to hold their next regular meeting as guests of the staff.

Nueces County Medical Society has elected the following officers for 1925: President, Dr. A. H. Speer, Corpus Christi; vice-president, Dr. G. Wyche, Robstown; secretary-treasurer, Dr. M. J. Perkins, Corpus Christi; censors, Drs. H. A. White and Edgar Mathis of Corpus Christi.

Smith County Medical Society met at Tyler, January 13, with 15 members and 1 visitor present.

Dr. J. M. Griffith read a paper on "Anaesthesia," stressing the pre- and post-anesthetic care of the patient.

This paper was discussed by Drs. E. W. Clawater and G. G. Bell of Tyler and Dr. R. T. Travis of Jacksonville.

After the scientific program a luncheon was served at the Blackstone Hotel, after which the following officers were elected: Dr. Roy L. Page, President; Dr. J. M. Griffith, Secretary-Treasurer; Drs. D. B. Braly, W. P. Brogan and E. W. Clawater, Censors; Dr. E. H. Vaughn, Delegate; Dr. E. D. Rice, Alternate.

Tarrant County Medical Society met March 3, 1925, with 35 members present.

Dr. R. W. Moore presented a case of complete posterior annular synechia due to gumma of the iris. Owing to the age of the boy, a strong solution of atropin was used and without danger of glaucoma. The boy had shown marked improvement under treatment. This case was discussed at length by Dr. F. D. Boyd.

Dr. C. H. Harris gave a very interesting discussion of the signs and symptoms that are of value in a diagnosis of pathological conditions of the upper abdomen.

Dr. M. E. Gilmore discussed the non-surgical management of abnormal conditions of the organs and viscera of the upper abdomen.

Dr. T. H. Thomason opened the discussion of the two papers, giving the different angles of surgical shock following surgery of the upper abdomen. Those who participated in the general discussion which followed were: Drs. Wm. O. Ott, E. P. Hall, E. C. Schoolfield, C. P. Hawkins, W. G. Phillips, I. C. Chase, E. H. Bursey and R. J. White, The discussions were closed by Drs. Harris and Gilmore.

Tarrant County Medical Society met March 17 with twenty-nine members present.

The following papers were read preparatory to being presented at the meeting of the State Medical Association in May:

Dr. H. L. Warwick—"Zinc Ionization in the Treatment of Acute and Chronic Suppurative Otitis Media."

Dr. K. H. Bell—"Glandular Fever." Dr. Bell's paper was discussed by Dr. C. P. Hawkins.

Dr. R. S. Mallard—"Idiopathic Atony of the Bladder." This paper was discussed by Drs. F. S. Schoonover, F. G. Sanders, and Wilmer L. Allison.

Dr. F. S. Schoonover—"Prostatectomy, A Follow Up Record in Forty-Two Cases." The paper was discussed by Drs. Charles Harris and R. S. Mallard.

Dr. Wilmer Allison read a proposed amendment to the constitution and by-laws. It was ordered sent to each member, and will be voted on at the next meeting.

Dr. Wilmer Allison reporting as chairman of the Committee on Permanent Home, stated that there were plans under foot for a Medical Arts building, but that the committee would not report unanimously on any one plan, and asked that the society instruct the committee to employ counsel if necessary or else recommend suitable action. General discussion followed. This request was granted by vote of the society.

Titus County Medical Society met March 10, 1925, with the following members present: Drs. S. R. Crabtree, J. S. Taylor, J. M. Ellis, S. C. Broadstreet, T. R. Bassett, A. A. Smith, W. A. Taylor, C. H. Wallace and T. S. Grissom, and one visitor, Dr. A. H. Williams of Talco.

Dr. J. S. Taylor presented a case of skin-grafting which had been done some two or three weeks before. This case was especially interesting to the society, inasmuch as when it had been presented to the society at their previous meeting, skin-grafting had been advised by members of the society at that time.

Tom Green County Medical Society met March 2, 1925, with 16 members present.

Dr. G. W. Nibling presented a case diagnosed a year ago as lethargic encephalitis, that now presents definite symptoms of sub-oxidation with general dyscrasia, including hypothyroidism, hypopituitarism and hypogonadism.

Dr. Hinde reported a case in an adult, of fracture of the twelfth rib, apparently caused by coughing.

Dr. M. V. Godbey read a paper on "Surgical Advancement in Last Twenty-five Years," which was a well written, well prepared, comprehensive discussion of new and improved methods and discoveries developed during this period of time. Mention was made of men, both in this country and in Europe, who have been responsible for the progress that has been made.

A free discussion was had concerning the advisability of going into the press with a campaign against the Chiros, and while no vote was taken, the majority seemed to think that it would not be wise at this time.

Van Zandt County Medical Society met in regular session at Canton, March 6, 1925, with 7 members and 1 visitor present.

Dr. H. H. Hilliard reported the case of a gunshot wound of the lung.

Dr. L. W. Shoemaker reported the case of a child who had swallowed a "beauty pin," and of another who had swallowed an open safety pin.

Dr. V. B. Cozby reported the case of a young lady stenographer suffering from a neuritis which resulted in a general mental confusion and in pain in upper limbs and shoulders. This case had finally drifted into the hands of a chiropractor.

Dr. V. Bascom Cozby read a paper entitled, "Cardiac Rhythm," which was freely discussed.

Dr. D. Leon Sanders read a paper entitled, "Pylorospasm: Its Medical and Surgical Treatment." This paper was also generally discussed.

Victoria - Calhoun County Medical Society has elected the following officers for the ensuing year: President, Dr. R. W. Ward, Victoria; vice-president, Dr. A. D. Gibson, Port Lavaca; secretary-treasurer, Dr. J. V. Hopkins, Victoria; delegate, Dr. A. D. Gibson; alternate, Dr. R. W. Ward; censor, Dr. F. B. Shields, Victoria.

Panhandle District Medical Society will meet in Amarillo, April 14-15. An attractive program has been prepared and a large and enthusiastic attendance is expected. Those who have never tasted of the hospitality of the plains country will have much to hold in anticipation. For further information concerning this meeting, address Dr. J. J. Crume, Amarillo, Texas.

The Seventh District Medical Society met at Austin, February 19, 1925, with about 60 members in attendance. The following scientific program was rendered:

"Recent Studies of the Texas Interurban Club of Internists Carried On at the Recent Travel Trip of this Club to the Mayo Clinic," by Dr. N. D. Buie, Marlin; "The Use of Mercurochrome Intravenously," by Dr. Lee Edens, Austin—discussed by Dr. Sam Woolsey, Austin; "The Agents of Dysentery and Their Diagnosis," by Dr. Kenneth M. Lynch, Dallas—discussed by Dr. G. Malcolm Graham, Austin; "Benign Neoplasms of the Uterus," by Dr. R. E. F. Bledsoe, Taylor—discussed by Dr. John Thomas, Austin; "A Few Remarks Regarding the Postoperative Treatment in Gynecology and Obstetrics," by Dr. E. W. Bertner, Houston—discussed by Dr. Joe Gilbert, Austin; "Conduct of the Average Obstetrical Case Complicated by Posterior Position," by Dr. Calvin R. Hannah, Dallas—discussed by Dr. A. F. Beverly, Austin; "Radiation Therapy," by Dr. R. Hassell Crockett, San Antonio—discussed by Dr. Dalton, Richardson, Austin; "The Relative Merits of the Different Anesthetics," by Dr. G. V. Brindley, Temple—discussed by Dr. Hugh McKeown, Austin; "Morbidity and Mortality of Birth Injuries," by Dr. Mary C. Harper, San Antonio—discussed by Dr. Geo. M. Dechard, Austin; "The Treatment of Peptic Ulcer" (Lantern Slide Demonstration), by Dr. W. B. Thorning, Houston—discussed by Dr. Zeno Martin, Austin; "Nature's Aid in Combatting Syphilis," by Dr. C. F. Lenham, San Antonio—discussed by Dr. J. W. Brady, Austin.

Following the morning Scientific Session, officers for the ensuing year were elected as follows: President, Dr. Summerfield M. Taylor, Austin; vice-president, Dr. W. G. Pettus, Georgetown; secretary, Dr. Hugh McKeown, Austin.

Immediately after the election, an enjoyable luncheon was served to the members and guests in the Pink Room of the Stephen F. Austin Hotel.

Reports of the Woman's Auxiliary.—At the meeting of the Auxiliary of the Texas State Medical Association at San Antonio last year, the following officers were elected: President, Mrs. John O. McReynolds, Dallas, Texas; President-Elect, Mrs. S. A. Collum, Texarkana; Vice-Presidents, Mrs. Jack Watts, San Antonio, Mrs. Roy Wilson, Houston, Mrs. W. M. Gambrell, Belton, Mrs. W. W. Waite, El Paso; Recording Secretary, Mrs. Henry Trigg, Fort Worth; Corresponding Secretary, Mrs. C. W. Simpson, Dallas; Treasurer, Mrs. W. M. Young, Dallas; Publicity Chairman, Mrs. F. D. Boyd, Fort Worth; Parliamentarian, Mrs. S. E. Hudson, Austin.

The work of the Auxiliary for the year as outlined by Mrs. John O. McReynolds, of Dallas, consisted in coöperation with the State Medical Association in the publicity campaign, by such means as aiding in the effort to have the general public read *Hygeia*, the A. M. A. publication written for the laity, and also in the special work which the organization was asked to engage in, the securing of pure milk and water throughout the State.

The Auxiliary was represented by Mrs. S. C. Red, of Houston, and Mrs. Henry Trigg, of Fort Worth, before the Council on Legislation and Public Instruction of the State Medical Association, at the meeting of that organization in Fort Worth, on November 7, 1924, and at that time outlined the policies of President Mrs. McReynolds and requested the coöperation of the Association.

The following reports have been received from County and District Woman's Auxiliaries:

Galveston County Auxiliary has an enrollment of 52, half of whom are reported as attending the meetings regularly. Each member of the Auxiliary has pledged herself to furnish a layette for the Red Cross service of the city.

Harris County Auxiliary has been very active during the past year. Among other activities might be mentioned the gift of a radio set to a tuberculosis hospital, the furnishing of 14 pairs of glasses to dependent children and a contribution to the City Art Museum. Most of the meetings have been well attended and good literary and musical programs have been provided.

The Seventh District Auxiliary has a paid enrollment of 26. The principal work done this year was that of aiding the Travis County Medical Society in making the 1925 Annual Session of the State Association a success.

The Fourteenth District Auxiliary met at Decatur and at Dallas during the meetings at these two cities of the Fourteenth District (North Texas) Medical Association. Much was done for the entertainment of the Auxiliary at both meetings, and those who attended reported a very pleasant and profitable meeting. At the Dallas meeting the President, Mrs. John O. McReynolds, read a very valuable paper on the pure milk and water campaign that the State Auxiliary is conducting.

Mrs. Henry Trigg of Fort Worth, Recording Secretary of the State Auxiliary, read a report of the work done by that organization, before the Woman's Auxiliary of the American Medical Association.

The Fifteenth District Auxiliary met at Texarkana, October 14, at the time of the Northeastern Texas Medical Society meeting, and the following officers were elected: President, Mrs. Wm. Hibbitts, of Texarkana; Vice-President, Mrs. F. Coslett, Big Sandy; Secretary, Mrs. E. M. Watts, Texarkana, and Treasurer, Mrs. R. L. Terry, Clarksville. The Auxiliary has been coöperating with the Red Cross, local hospitals and charitable organizations. At the first meeting of the State Medical Auxiliary following the organization, the Fifteenth District was represented by twelve representatives, five of whom were officers of the organization, and their delegates have been present at every meeting since. The enrollment at present is twenty-eight active members and seven honorary members.

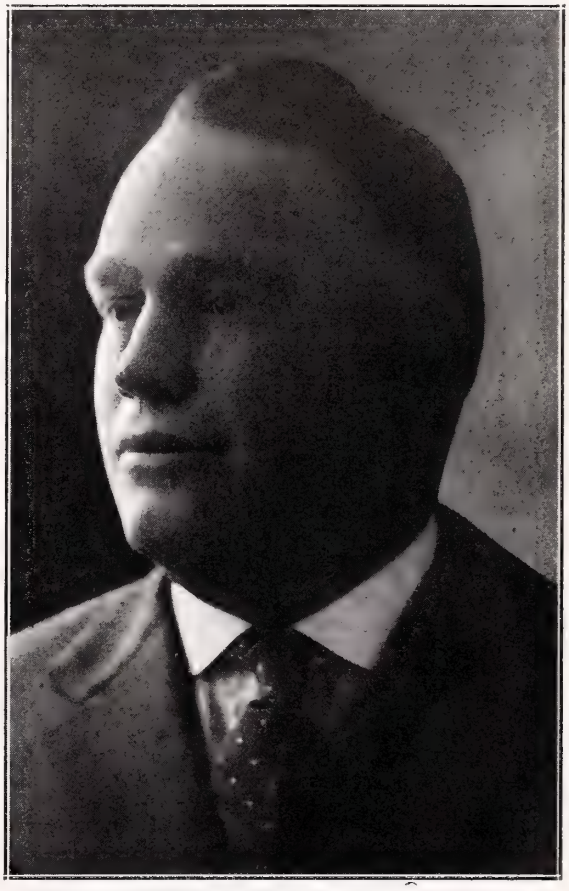
Personal.—Dr. Phil R. Simmons of Weatherford, Texas, is taking some special work in eye, ear, nose and throat diseases at Tulane University, New Orleans, Louisiana. He expects to return to Weatherford in about a month.

CHANGES OF ADDRESS.

Dr. N. W. Gustine, from Alcedo to Shepherd.
Dr. W. A. Denson, from Ben Arnold to Chilton.
Dr. R. R. Allen, from Roby to Sweetwater.
Dr. Alvin Dinwiddie, from Texarkana to Wicks, Ark.
Dr. J. B. Baldwin, from Dallas to Cushing, Okla.
Dr. W. M. Shytles, from Terrell to Rusk.
Dr. D. B. Westerman, from Dallas to Cooper.
Dr. W. W. Lowrey, from Leroy to Hillsboro.
Dr. H. L. Stewart, from Lone Oak to Wills Point.

DEATHS

Dr. Ralph Thomas Blount died of pneumonia at St. Joseph's Infirmary, Houston, Texas, February 18, 1925. He was born February 15, 1877, at Frankston, Texas. He acquired his preliminary education in the public schools of Palestine, and also attended St. Edward's College at Austin, and Southwestern University at Georgetown. He received his M. D. degree from the University of Texas at Galveston, in June, 1899. He did postgraduate work in Philadelphia and then went to Mexico, where he practiced for four years. Returning to the States, he practiced at Teague, Texas, for about one year and then went to Bear Grass, where he practiced for both the Bear Grass Company and the Leon County Coal Company. Later he located at Lovelady, Texas, from which place he moved to Wootters, where he was physician for the Houston-Leon Coal Company.



DR. RALPH T. BLOUNT.

Dr. Blount was a Scottish Rite Mason, being a member of the El Mina Temple at Galveston. He belonged to the Trinity Chapter No. 4, Royal Arch Masons, was a member of Lovelady Lodge, A. F. & A. M., and was also a member of the Odd Fellows Lodge.

He married Miss Laura Lawrence of Lovelady, Texas, April 12, 1921.

Dr. Blount had long been a valued member of his County Medical Society and of the State Medical Association. A host of friends join with his relatives in mourning his loss. He is survived by his wife, Mrs. R. T. Blount of Wootters.

Dr. William A. Bates died at his home at Purdon, Texas, February 6, 1925. Dr. Bates was born at Sparta, Texas, April 17, 1852. When he was three years of age, his family moved to Arkansas, and then to Wyoming, and from there to Montana. From Montana they went to Canada and upon returning to the States, settled in Arizona. Dr. Bates studied medicine under his father, who was a surgeon of considerable note, and attended Howard College. He practiced among the Indians in the Northwest Territory. He came to Navarro county and located at Purdon in 1887, where he had engaged in the practice of medicine up to the time of his death. Dr. Bates had long been a consistent member of Navarro County Medical Society, and of the State Medical Association.

While living in Arizona, Dr. Bates married Miss Hattie Jones, to which union were born two daughters, Mrs. J. O. Mitchell of Purdon, and Mrs. D. E. Dickson of Corsicana, Texas. His first wife died in 1919, and in 1921 he married Miss Cora Compton, to which union was born one son, Wm. A. Bates, Jr.

The following tribute was paid Dr. Bates by one who knew him well:

"He enjoyed the full confidence of a large circle of friends and patients. He went through the dark and mud in the cold, swam swollen streams, and endured many other hardships incident to general practice in the rural districts. * * * He was always cheerful and carried sunshine to every home he visited. * * * Peace to his ashes and honor to his memory."

He is survived by his wife, two daughters and his young son.

Dr. Little Lee Mahan of Hempstead, died February 15, 1925, in the Union Memorial Hospital at Baltimore, Maryland.

Dr. Mahan was born in Franklin County, Alabama, August 22, 1861. He attended the State Normal School of Florence, Alabama, and in 1885 was graduated from the Kentucky School of Medicine at Louisville, returning to this school in 1898 for postgraduate work, and later taking further postgraduate work in New York. In the fall of 1895, Dr. Mahan moved to Waller County, Texas, and began the practice of medicine at Sunny Side. In 1897 he moved to Hempstead, where he was in active practice up to a short time before his death.

Dr. Mahan was a charter member of the Waller County Medical Society, and at one time served as its president; at the time of his death, he was secretary of this society. He had been an active member of the State Medical Association of Texas since 1891, and was also a member of the American Medical Association, The Southern Medical Association, South Texas Medical Society, and the Southern Railroad Surgeons. For 24 years he had been local surgeon for the Houston & Texas Central Railroad at Hempstead. During the World War he served as a member of the Local Medical Examining Board, was chairman of the Council of Medical Defense of Waller County, and a member of the Volunteer Service Medical Corps. At the time of his death, he was caring for the disabled colored soldiers attending the Prairie View State Normal. For over thirty years he had been an Elder in the Presbyterian Church. He was a Thirty-Second Degree Mason, and was Worshipful Master of the Hempstead Lodge, A. F. & A. M., at the time of his death. He was a Shriner and a member of the Order of the Eastern Star. Not only was he prominent in church, medical and fraternal circles, but he was one of Waller County's outstanding citizens, always taking a deep interest in civic affairs, and bearing his full share of the community's burdens. He was president of the Citizens State Bank at Hempstead.

Dr. Mahan married Miss Bee Harper of Coquille, Oregon, May 27, 1891, and to this union were born two daughters and one son.

He is survived by his widow and three children, Mrs. E. H. Keller, Jr., of Fort Worth, Mrs. A. L. Morrison of Yuma, Arizona, and Harper Mahan of Hempstead; two brothers, John J. Mahan of El Paso, and Burgess Mahan of Russellville, Alabama; by five sisters, Misses Nannie and Sess Mahan, Mrs. Graham Graves and Mrs. L. B. Sanders of Hempstead, and Mrs. B. F. Orman of Russellville, Alabama; and one grandson, Daniel Lamson Morrison of Yuma, Arizona.

DR. LITTLE LEE MAHAN.

Dr. William Polk Richardson died of pneumonia, following influenza, at the Scott and White Hospital, Temple, Texas. He was born at Buna, Jasper County, January 15, 1877. After attending the public school at Buna, he graduated from the Jasper High School. Following his graduation, he attended the Sam Houston Normal, receiving a first grade certificate from this institution in 1900. He taught school at Chiro Springs, in Jasper County, from 1900-1901, and then re-entered the Sam Houston Normal from which he graduated in 1902. In the fall of 1902, he entered the State University at Galveston, where he completed his Freshman and Sophomore years, and in 1904 he entered Tulane University from which he received his medical degree in 1906. After graduation he relieved his old family physician at Buna, for a few months, and then moved to Evadale, Texas, where he worked under contract for the Kirby Lum-

ber Company. The following year he moved to Blewett, La., where he engaged in contract practice for the Blewett-Smyth Company. In 1911 he returned to Texas, locating first at Jacksonville, but was soon persuaded by his cousin, Dr. S. C. Richardson, to go to Somerville, as the latter's associate and the Drs. Richardson were soon appointed local surgeons for the Santa Fe railroad. In 1921 Dr. Richardson moved to Beaumont, where he erected a beautiful home and practiced for a few months, after which he decided to return to Somerville, where he became associated with Dr. E. W. Stork. He continued to practice with Dr. Stork up to the time of his death.

Dr. Richardson was a member of the Presbyterian Church, a Mason, a Woodman of the World, and a member of the Optimist Club of Somerville. He had for many years been a member of Burleson County Medical Society, the State Medical Association, the Southern Medical Association and the American Medical Association. He took great interest in all civic affairs, and a host of warm friends and devoted patients join his family in mourning his loss. He was a great lover of sport, and very fond of all kinds of outdoor recreations.

Dr. Richardson married Miss Stella B. Couch of Jacksonville, Texas, September 22, 1907, and to this union were born three children. He is survived by his widow, and three children, Walter Brown, Wm. Polk, Jr., and Gwendolyn, and by his father, Amos R. Richardson, a Confederate veteran 86 years of age, and his mother, Mary Gandy Richardson.

Dr. F. P. Yates died of pneumonia at his home at Rusk, Texas, January 17, 1925.

Dr. Yates was born in 1853, and received his preliminary education from the Manchester and Stevenson's institute. He received his degree in medicine from the Medical Department of the University of Tennessee, in 1884. Dr. Yates had formerly practiced at Caddo Mills from 1880 to 1896, at Royse City from 1894 to 1895, and at Greenville. At the time of his death, he had for four years been a physician at the East Texas Insane Asylum at Rusk.

Dr. Yates had long been a faithful member of his County Society and of the State Medical Association. A host of loyal friends, both among the laity and the profession, join with his wife in mourning his loss.

BOOK NOTES

Practical Medicine Series, 1924, comprising eight volumes of the year's progress in medicine and surgery. Charles M. Mix, A. M., M. D., General Editor in Charge. Price of the Series of eight volumes, $15.00.

Volume I, "General Medicine," edited by Geo. H. Weaver, M. D., Lawrason Brown, M. D., Robert B. Preble, A. M., M. D., Bertram W. Sippy, M. D., and Ralph C. Brown, B. S., M. D. 12 mo. cloth; 736 pages. Price $3.00.

Volume II, "General Surgery," edited by Albert J. Ochsner, M. D., F. R. M. S., LL.D., F. A. C. S., F. R. C. S., Ir. (Hon.), 12 mo., cloth; 796 pages. Price $3.00.

Volume IV, "Pediatrics," edited by Isaac A. Abt, M. D., with the collaboration of Johanna Heumann, M. D. 12 mo., cloth; 381 pages. Price $2.00.

Volume V, "Gynecology," edited by Thomas J. Watkins, M. D., F. A. C. S., Professor of Gynecology, Northwestern University Medical School, and "Obstetrics;" edited by Joseph B. De Lee, A. M., M. D., Professor of Obstetrics, Northwestern University Medical School, with the collaboration of J. P. Greenhill, B. S., M. D., Instructor in Obstetrics, Northwestern University Medical School. 12 mo., cloth; 534 pages. Price $2.00. The Year Book Publishers, 304 Dearborn Street, Chicago, Illinois.

The Practical Medicine Series has enjoyed such an enviable reputation over a period of years, that it is hardly necessary to attempt any extensive review of the four volumes belonging to the 1924 series, that we have received. The list of contributors to each of these volumes is long and imposing. The review given in each volume of its special field of medicine is compact, and yet should enable the reader to gain a very fair conception of the past year's contribution to medical thought.

Practical Lectures, 1923-1924 Series, delivered under the auspices of the Medical Society of the County of Kings, Brooklyn, New York. 8vo., cloth; 484 pages, 132 illustrations and three color plates. Price $5.00 net. Paul B. Hoeber, Inc., Publishers, 67-69 East 59th street, New York City, N. Y.

This volume contains the following chapters: I, The Surgical Abdomen—Joseph A. Blake; II, An Appraisal of Certain Physical Signs in the Diagnosis of Incipient Pulmonary Tuberculosis—H. A. Bray; III, The Treatment of Pneumonia—Harlow Brooks; IV, Appendicitis—William Francis Campbell; V, Surgical Diagnosis—John B. Deaver and Stanley P. Reimann; VI, Office Gynecology—Robert L. Dickinson; VII, Rational Pathology and the New Therapeutics—James Ewing; VIII, The Common Skin Diseases—John A. Fordyce; IX, Diagnosis of Abdominal Tumors—Russell S. Fowler; X, The Diagnosis and Treatment of the More Common Rectocolonic Diseases—Samuel G. Gant; XI, Common Diseases of the Breast—John E. Jennings; XII, Diabetes and Insulin—Louis C. Johnson; XIII, Subacute Bacterial Endocarditis in the Active and Healing Stages—Emanuel Libman; XIV, Backache—W. Russell MacAusland; XV, The Chronic Diseases of the Joints—Thomas McCrae; XVI, Renal Function in Clinical Medicine—Herman O. Mosenthal; XVII, Everyday Bacteriology—Wade W. Oliver; XVIII, Dry Labor—John Osborn Polak; XIX, The Management of the Breech—John Osborn Polak; XX, Ectopic Gestation—John Osborn Polak; XXI, The Contagious Diseases—Joseph C. Regan; XXII, Epidemic Encephalitis—Frederick Tilney; XXIII, Office Orthopedics—Walter Truslow; XXIV, Medical Psychology—James J. Walsh; XXV, Fundamental Signs in the Examination of Patients—Luther E. Warren.

A glance at the list of authors of national and even international reputation, should be enough to recommend this book to our readers. The subjects chosen by each of the authors are those upon which they are peculiarly fitted to write. The binding of the volume is attractive and the typographical work excellent. The numerous illustrations show evidence of careful selection and are rare testimonials to the engraver's art.

Text-Book of Physiology. For Medical Students and Physicians. By Wm. H. Howell, Ph. D., M. D., Professor of Physiology in the School of Hygiene and Public Health, Johns Hopkins University of Baltimore. Ninth edition, thoroughly revised. 8vo., cloth; 1069 pages, 308 illustrations. Price $6.50 net. W. B. Saunders Company, Publishers, Philadelphia and London.

This text-book of physiology has stood the test of time and still remains perhaps the most popular work on the important and fundamental subject of

physiology. The present volume remains very much the same as that of the two previous editions. However, there have been some important changes made in line with recent biochemical work in the fields of digestion and nutrition. The chapter on internal secretions has been largely revised. As stated in the author's preface, the proper understanding of this work presupposes as a foundation, a knowledge of anatomy, both gross and microscopic, and some previous training in physics and chemistry.

The busy practitioner who is seeking exact knowledge concerning the physiology of any of the body structures, will find in few books in so clear and authoritative a form, the information that he desires. The student of medicine, whether medical student or practitioner, will not fail to recognize that the book has been written by one who is a thorough master in the writing of text-books. Dr. Howell has long been recognized as one of America's leading physiologists, and were his standing dependent upon this one volume, his reputation as a physiologist would be secure.

Manual for Diabetics. By Gladys M. Boyd, M. D., Director of the Diabetic Clinic, Hospital for Sick Children and Marion D. Stalsmith, Dietitian, Hospital for Sick Children, Toronto, Canada. Introduction by F. G. Banting, M. D. 12 mo., cloth; 101 pages. Price $1.50. Funk and Wagnalls Company, Publishers, New York City, N. Y.

This little volume is written principally for the diabetic patient, and Dr. Banting, the discoverer of insulin, recommends that physicians advise their diabetic patients to read this book, as "it is essential that patients should understand thoroughly the cause, the course, and the complications of the disease, in order that they may intelligently carry out their physician's instructions." In the Foreword, a brief statement of the cause of diabetes and of the discovery and preparation of insulin is given. The first chapter deals with the insulin treatment, the second discusses foods which should be eaten by the diabetic, the third discusses weights and measures, and gives a table of the English and metric equivalents. The fourth discusses "Complications," while the fifth gives directions for Benedict's test for sugar and the sodium nitro-prussid test for acetone in the urine. The sixth chapter gives tables of food values, while the remaining two chapters, seven and eight (comprising about one-half the volume), are devoted to "Diabetic Recipes," and "Menu Planning," respectively.

Pseudo-Appendicitis. A Study of Mechanical Syndromes of the Right Lower Quadrant Simulating Appendicitis. By Thierry De Martel, and Edouard Antoine, authorized translation from the French by James A. Evans, A. B., M. D., formerly Assistant Radiologist, Hospital St. Antoine, Paris. Preface by R. Bensuade. 12 mo., cloth; 211 pages, 41 engravings. Price $3.00 net. F. A. Davis Company, Publishers, Philadelphia, 1925.

In the translator's preface to this timely volume appears the following statement of the *raison d'etre* of the book. "It is offered in special appeal to the general practitioner and general surgeon of the smaller hospitals where the formula, 'Dyspepsia plus tenderness over McBurney's point equals Appendectomy,' is so apt to lead to unwarranted surgery." Attention is called to the undeniable fact that both reason and experience would indicate that appendectomy all too frequently fails to relieve the symptoms of "chronic appendicitis." The authors insist that the physician who has such a case in charge should consider the advisability of other treatment before and not after removal of the vermiform appendix. The statistics published by Gibson (*Amer. Jour. of Med. Sc.*, May, 1920, p. 654), are given, which show among other things that 40 per cent of the operated cases of chronic appendicitis were not cured by appendectomy. Dr. Antoine is peculiarly endowed for writing such a book owing to his ability as an intestinal fluoroscopist and as a diagnostician. Plate IX on page 195, shows an ileosigmoidostomy in which the Murphy button is used to secure coaptation of the serous surfaces and the button is described as a "Villar's button." We have never heard of any one disputing Murphy's claim to this button. The description of the condition described as "mobile cecum" is very lucidly described and the treatment for the condition clearly outlined. This little volume deserves a wide sale, and great popularity.

Fundamentals of Human Physiology. By R. G. Pearce, B. A., M. D., formerly Director Medical Research Laboratory, Lakeside Hospital, Cleveland, Ohio; formerly Assistant Professor of Physiology, University of Illinois, Chicago, Illinois; and J. J. R. Macleod, M. B., D. Sc., F. R. S., Professor of Physiology in the University of Toronto, Canada; formerly Professor of Physiology, Western Reserve University, Cleveland, Ohio. Assisted in the Third Edition by Dr. Norman D. Taylor. Third Edition, 12 mo., cloth; 350 pages, illustrated. Price $3.50 net. C. V. Mosby Company, St. Louis, 1924.

The purpose of this volume is stated in the preface of the first edition as being "to give an elementary yet comprehensive review of the various facts and theories which go to form the modern science of human physiology." This volume gives in a very entertaining and succinct form a very satisfactory outline of human physiology. It is by no means an exhaustive treatise on the subject, and the student seeking a detailed description of any of the many intricate functions of the body must look elsewhere for his material. The busy practitioner, however, and the student of medicine desiring a general knowledge of the subject, will find the volume both entertaining and instructive. Both of the authors are well known as physiologists, and especially Dr. Macleod through the fame which he achieved in conjunction with Dr. Banting, in the discovery of insulin.

Manual of Obstetrics, Second Edition, Reset. By John Cooke Hirst, M. D., Associate in Gynecology and Obstetrics, School of Medicine, and Graduate School of Medicine, University of Pennsylvania. 12 mo., cloth, 511 pages, 229 illustrations. Price $4.50 net. W. B. Saunders Company, Philadelphia and London.

This manual of obstetrics, which is quite familiar to most obstetricians, has undergone a thorough revision. This revision was so thorough, indeed, that the book had to be reset. The long chapters on embryology, anatomy and physiology usually found in text-books on obstetrics, have been omitted, as the book is intended not as a reference book for the student of medicine, but as a useful guide in the actual practice of obstetrics. This edition of the book contains much new material, including the Rubin test for artificial pneumoperitoneum to establish patency or closure of the fallopian tubes; the technique of the Potter method of podalic version; the Kielland forceps, and many other of the newer methods of obstetrics. The general practitioner, as well as the obstetrician will appreciate this clear cut and practical manual.

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